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ABSTRACT

These proceedings consist of 16 papers, some of which are followed by discussants' comments. They include: "Growing Older in a Rural Retirement Community" (Brokaw, Peters, Tripple; discussants Olson, Tucker; "An Interactive Computer Model for Achieving Personal Financial Goals" (Dilbeck, Hinds, Ulivi; discussants Burton, Peterson); "The Economics of Divorce and Remarriage for Rural Families" (Rowe, Lown; discussant Smith); "Economic Well-Being and Adaptation to Stress of One-Earner and Two-Earner Rural Nevada Families" (Baird); "Subjective Life Quality in Dairy Farm Households" (Ackerman, Jenson, Bailey); "Who Prepares a Balance Sheet? An Exploratory Analysis" (Davis); "Mutual Funds: It's OK To Talk about Them" (Israelsen, Beutler); "Factors Related to Perceived Income Adequacy among Married Students" (Jeries); "Development of Models of the Labor Force Patterns of Southeast Asian Refugee Women" (Johnson); "Consumer Perceptions of the Quality and Safety of Conventional and Organic Foods" (Jolly, Johal); "Application of the Consumer Diffusion of Innovation Model to Teachers' Adoption of Microcomputers" (Longstreth, Kelly, Paris); "Resources Used by Families to Save Time Spent on Meal Preparation: Comparison in Single Parent, Two-Earner, and One-Earner Families" (Sullivan, Peters); "Living Resourcefully--It's Your Decision: An Interdisciplinary Extension Educational Program" (Walker); "Utah's Child Support Guidelines" (Billings); "Does Your Research Make a Difference: Applications of Indicators of Impacts" (Makela, Tucker); and "Critical Concerns of Kansas Families: A Statewide Survey by Extension Home Economics, Kansas State University" (Walker, Corbin). Appended to the document is an author and title index to conference proceedings from 1970-1987, compiled by Tucker and Makela. (YLB)

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Home Management Family Economics Educators

Volume 3

1988

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28th Annual Conference

"Stress: Family, Economic, and Management Considerations"

November 3-5, 1988
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Papers

28th Annual Conference
of the

WESTERN REGION HOME MANAGEMENT FAMILY ECONOMICS EDUCATORS
Volume 3

November 3-5, 1988
Salt Lake City, Utah

Edited by
Arlene Holyoak
Oregon State University
Corvallis, Oregon

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FOREWARD

Jane McCullough

The 28th Annual Conference of the Western Regional Home Management - Family Home Economics Educators was held November 3, 4 and 5 in Salt Lake City, Utah. The conference, its theme "Stress: Family, Economic and Management Considerations", and our keynote speaker were inherited from the University of Nevada. The Utah Committee appreciated the work that Ginny Haldeman and Jeanne Peters had completed; it made our task much easier.

Richard H. Rahe, M.D., Director of the Nevada Stress Center, opened the conference with a presentation on stress and coping. As many of us were familiar with the Holmes and Rahe Change Scale that was developed in the early 1970s, we were interested to learn about the current development in stress and its effects on people. Dr. Rahe's presentation was informative and elicited numerous questions from the conference participants. As Dr. Rahe did not prepare a written text but spoke using slides to illustrate his points, a copy of his presentation does not appear in the proceedings. I did not know about this until after the presentation when it was too late to request a manuscript.

The other invited speakers were Judge Judith M. Billings, Utah Court of Appeals, and Orrin Hatch, U.S. Senator from Utah. Judge Billings was the Chair of the Utah Child Support Guidelines Task Force. She described the procedure used by the Task Force to establish the guidelines, the research that guided decisions, and frustrations and barriers encountered. Barbara Rowe and Cathy Zick were members of the Task Force and both developed great admiration for Judge Billings as a result of their work. After listening to her presentation, it was easy to understand their respect for her.

As the conference was held just before the general election, we decided it would be timely to hear about federal family policy from a politician's point of view. Senator Orrin Hatch reviewed some policies and politics involved in framing and enacting bills on the federal level. His insights were informative although some were discouraging to those of us concerned about the welfare of families.

The three refereed papers covered diverse issues including the economic consequences of divorce and remarriage, factors that attract and retain retirees to a community and a computer program that had been developed to use in financial planning. Each presentation was followed by comments from two discussants and then questions from the audience. The presentations led to thought provoking discussions.

Eight reviewed papers, covering diverse topics were also presented. As I listened to the papers presented by our members, I couldn't help thinking how proud Irma Gross would have been. I remember the conference at Oregon State University when Dr. Gross said how good all of our invited speakers had been, but that she felt we had matured as an organization and as professionals to the point where we could begin "talking to ourselves". Our review processes were developed as a result of her encouragement and since then our conferences have provided a forum where we can present our research to each other.

An important part of a conference is the informal interaction with colleagues sharing what's going on in our professional and personal lives. The WRHMFEE Conference provided opportunities to renew friendships, catch up on developments at various campuses and current activities and accomplishments of colleagues. Conference participants found time for eating, attending the Tabernacle Choir rehearsal, researching ancestors at the geneological library and even for shopping.

The Conference Committee, Cathy Zick and John Burton from the University of Utah and Barbara Rowe, Jean Lown, and myself from Utah State University, appreciate all those who helped make the conference a success. To those who attended, thanks for coming.

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GROWING OLDER IN A RURAL RETIREMENT COMMUNITY: THE LAKE TOPAZ EXPERIENCE

Leslie J. Brokaw, Hewlett-Packard
Jeanne M. Peters, University of Nevada-Reno
Patricia A. Tripple, University of Nevada-Reno

As people age, they experience economic, social, environmental and psychological changes. One of the most significant changes that takes place in later life is retirement. While the usual age for retirement continues to be age 65, many employees opt for early retirement, while others continue to work well beyond the ages of 65 or 70. Along with retirement decisions, many older adults also face decisions about housing, including whether to continue living where they are or whether to relocate (Biggar 1980).

Mobility rates for elderly persons have been increasing steadily, throughout the nation, challenging the myth that the elderly are firmly rooted. Migration rates for the elderly were more than half of the national average between 1965 and 1970 (Biggar 1980), with 28 percent of the population age 60 and older reporting a change of residence during these years (Graff & Wiseman 1978).

The U.S. Bureau of the Census (1984) has reported that when the elderly migrate, they tend to go to retirement areas, rural or small communities, their birth state, or they go abroad. Researchers have also noted two major trends in migration destinations of the elderly. They tend to migrate to the sunbelt states in the southern and western part of the United States, and/or they migrate to remote rural areas to escape urban stress (Naisbitt 1982; Gunn & Tripple 1987). Nevada is experiencing the effects of these trends. The rate of in-migration for the elderly population in Nevada is 46 percent and rising faster than elderly populations in most other states (Serow, 1987). Many of these elderly have moved from metropolitan areas in southern California to remote rural communities in Nevada.

Research related to rural retirement communities or the rural elderly is limited (Aday & Miles 1982). Furthermore, little in the migration literature refers specifically to the migration of retirees (Lee 1980; Beaver 1979). However, several researchers have studied factors which trigger migration of the elderly (Barsby & Cox 1975; Chevan & Fischer 1979; Wiseman 1980).

Wiseman (1980) states that long distance moves are likely to occur at the time of retirement. Many migrants anticipate and plan relocation before actually retiring. Keating and Brundin (1983) interviewed a group of 49 men between the ages of 50 and 70 and found that the most important factor contributing to relocation was the act of retirement. Chevan & Fischer (1979) state "retirement may thus be seen as a precipitating event for migration" (p. 1366).

There are many factors related to quality of life that trigger migration of retirees. A retiree may migrate in order to move in with, or to be close to, a child. Some retirees migrate because they want to pursue a more relaxed lifestyle. These retirees are attracted to areas where the cost of living is relatively low (Heaton, Clifford, & Fuguitt 1980). There are retirees who prefer a lifestyle which "includes golfing and other leisure activities." These retirees are likely to choose specialized amenity retirement communities (Gober & Zonn 1983). Wiseman (1980) has concluded that those who are economically strong tend to migrate to retirement communities in search of climate and recreational amenities, while those with low economic stability tend to reside in place until they are forced to relocate because they need assistance.

Barsby and Cox (1975) found that a major limitation in doing research on migration of the elderly has been that previous researchers have not attempted to isolate attracting factors which attract the migrating elderly but have limited their research to a description of migrating patterns. Two additional research limitations were that small sample sizes have produced unwarranted generalizations and that only simple associations between attractors and mobility have been identified (Barsby & Cox 1975). In spite of these limitations, some factors that attract retirees to rural communities have been examined in the literature.

Factors that Attract Retirees to Rural Communities

The major underlying reason for migration of retirees is a search for an improved quality of life (Abdel-Ghany 1977; Gober & Zonn 1983; Kim & Hartwigsen 1983). While there is no clear conceptualization of quality of life, there are specific social, economic and physical factors which affect one's perception of quality of life, i.e., pollution, congestion, quality of health care, crime rates, resource availability, and climate (Abdel-Ghany 1977). There is some consensus among researchers that weather/climate, cost of living, lack of congestion, lower crime rate, recreation, good health, and friends/relatives contribute both to a better way of life and to migration of the elderly (Barsby & Cox 1975; Gober & Zonn 1983; Sell & DeJong 1978; Wiseman 1980; Beaver 1979; Longino 1980).

Factors that Retain Retirees in a Rural Community

At the time when the retiree chooses to relocate, personal needs and wants are different than they will be ten to fifteen years later. Barsby and Cox (1975) have noted that as people age, some factors assume increasing importance (e.g., community concerns such as lack of medical services, family concerns such as wishes and desires of the spouse, and personal concerns such as inability to care for themselves).

Health is one factor that greatly affects a person's sense of housing independence (Montgomery 1967). A decline in health causes a need for assistance; therefore, moving to be closer to family members or into a nursing facility is sometimes necessary.

The need for public transportation may also cause a retiree to move in order to have access to medical services, shopping, and family. The facilities that are available in rural communities often become inadequate as elderly residents become increasingly dependent on others due to the aging process. Lack of support within the community interferes with quality of life for these elderly and they are then motivated to make a move to meet their needs (Montgomery 1967).

Statement of the Problem

This study utilized data from Nevada Experiment Station Project 902, "Growing Older in a Rural Retirement Area: Family and Community Perspectives." The purpose of the Experiment Station project was to develop a profile of the characteristics of in-movers to a specialized amenity retirement area, Lake Topaz in Nevada, in order to provide a research base for planning for the long-range needs of young elderly in-movers to rural retirement areas. This study contributed to that profile by determining differences in 1) demographic characteristics, 2) factors which attracted retirees to the area, 3) factors which would cause retirees to move away from the area, and 4) differences in retirees satisfaction with life.

Life cycle theory, which proposes that life occurs in ordered and progressive stages, has been used most extensively in the gerontological literature. Social Phenomenological Theory, one of the major family theories in use today (Burr 1979), is a more developed and comprehensive theory, therefore it was used to direct this study. Starr's (1985) theory of phenomenology holds that the individual is able to facilitate change by making choices. For example, the elderly can look at what they do not like in their current environment, consider their alternatives and make the appropriate choices to better their lifestyles.

Using the social phenomenological approach, it was hypothesized that retirees move in search of a better quality of life, that there would be specific factors that attracted retirees to the Lake Topaz area and that, after moving to the new area, the process of evaluation of the environment would continue. If the retirees were dissatisfied with the quality of life in the Lake Topaz area, another move would be considered.

One objective of the study was to determine whether or not planned tenure (PLAN TO STAY, UNDECIDED, PLAN TO LEAVE) was dependent on: demographic characteristics of the respondents, factors which attracted retirees to the community, or factors which would cause retirees to move from the community. A second objective was to assess differences among the three groups of retirees in satisfaction with life today, satisfaction with life today compared to ten years ago, and expected satisfaction with life ten years in the future. Using a social phenomenological approach, that data were viewed from both the individual and community perspectives, in order to examine implications for action, both on the part of individual retirees and the wider community in planning for the future.

Description of the Lake Topaz Area

Lake Topaz, Nevada, a rural residential area that is attracting retirees, was selected as the site for the research project. Topaz Lake lies 36 miles south-southwest of Carson City, Nevada on the California-Nevada state line, at an altitude of 5,000 feet. The climate is considered to be arid, to semi-arid, cold desert with temperatures ranging between a high of 102 degrees to a low of 14 degrees. The average temperature is 50 degrees. The area experiences sunny days about 80 percent of the time.

There are two areas where residents live: at the lake and at Topaz Ranch Estates (TRE). TRE is located five miles north of the lake. The majority of the residents live at TRE and about one third of the population lives at the lake. The total population of Topaz is 1,252. Seventy-eight percent of Topaz residents are retired in-movers from California. Virtually all of the residents of the Lake Topaz area have moved to the area within the last ten years.

The majority of people are 50 years of age or older and most (98%) own their own homes. Lot sizes average from two to three acres each. Most of the residential areas have dirt roads and there are no stop lights. The nearest shopping facilities are 19 miles to the north in Gardnerville/Minden. The closest hospital is 36 miles to the north in Carson City. There is a volunteer fire department, a church and a community hall. The local Extension Homemakers club has 75 members. Shopping facilities in the community are very limited. There is one casino and restaurant, one gas station, a small mini-mart food store and a full service marina located at Topaz Lake. Recreational activities focus on fishing and boating. The lake's recreational amenities include two campgrounds.

Description of the Sample

The sample for this study included 274 of the 331 respondents from the larger study of Lake Topaz resident. To qualify for this study, respondents had to have indicated that they considered themselves to be retired or semi-retired. (Fifty-seven of the respondents were employed, therefore they were excluded from the study.) The sample included fewer male (45%) than female (55%) respondents. Almost half of the respondents (49%) were in the 50-64 age group, and nearly half (45%) had incomes in the $10,000 to $20,000 range. Education levels were relatively high with almost half (47%) reporting some college education. The majority (81%) were married and in good health (70%). Table 1 summarizes the characteristics of the sample.

TABLE 1. Characteristics of Sample (N=274)

	N	% of Sample
Sex		
Male	118	45%
Female	146	55%
	264	
Age		
50-64	133	49%
65-74	107	40%
75-85+	29	11%
Income		
$0-9,999	26	13%
$10,000-19,999	88	45%
$20,000-29,999	38	20%
$30,000-39,999	16	8%
$40,000-49,999	9	5%
$50,000 plus	15	8%
	192	
Education		
0-8 years	12	5%
Some High School	133	50%
Some College	122	47%
	267	
Marriage		
Not Married	50	19%
Married	219	81%
Health		
Good	190	70%
Fair	67	25%
Poor	8	3%
	204	

Description of the Instrument

An eight page written questionnaire was used to collect data for the project. The questionnaire took approximately twenty to thirty minutes to complete. In each of the seven sections there were no more than ten questions. The majority of questions required a simple check mark response; there were only six questions that required a written response. Two questions asked retirees what caused them to move to the Lake Topaz area, and what might cause them to move away. Respondents were asked to check all answers that applied. At the end of the questionnaire, the researchers provided space for respondents to make comments and/or provide additional information.

Procedure

Data were collected in fall of 1986 using a questionnaire that was administered by trained community research assistant. The assistants were solicited from the Lake Topaz area using a newspaper advertisement, flyers, and posters. Nine research assistants were selected from those who responded to the solicitations and a training session was conducted at the Lake Topaz community hall by the principal investigators. Each resident in the Lake Topaz area who met selection criteria was contacted by phone by one of the nine community research assistants and asked to participate in the study. If the respondent agreed, an appointment was set up for the community research assistant to visit the home and administer the questionnaire. The questionnaire was completed, usually in about twenty minutes, and then placed in a sealed envelope to ensure confidentiality.

Twenty-two days were allocated for the community research assistants to complete the process of data collection. Out of 372 households contacted, a total of 209 (76%) households participated in the study, giving a sample of 331 persons 50 years of age or older, of whom 274 were retired or semi-retired.

Three sets of independent variables were used in the study. The first set measured demographic characteristics of the respondents and included sex, age, income, education, and marital status. The second set measured factors that attracted retirees to the Lake Topaz area and included better way of life, better weather, lower cost of living, lack of congestion, lower crime rate, better recreation, better health, and friends/relatives. The third set measured factors which would cause retirees to move away from Lake Topaz and included COMMUNITY CONCERNS such as growth in population, tax increases, water problems, lack of medical services, FAMILY CONCERNS such as wishes and desires of the spouse, need to care for elderly relative, need to care for younger relative, need to manage family property, and PERSONAL CONCERNS such as inability to drive a car, inability to care for home, inability to care for self, loss of employment, and loss of spouse.

The dependent variable was residential tenure which was defined, for the purposes of this study, as the respondent's self-reported intention to remain or not to remain in the community. This variable was measured at three levels: PLAN TO STAY included those respondents who intended to remain in the community for life; UNDECIDED included those respondents who stated that they were undecided about whether they intend to stay or leave; and PLAN TO LEAVE included those respondents who plan to move away within the next five years. Variables used to assess quality of life for the three groups of residents were satisfaction with life today, satisfaction with life today compared to ten years ago, and expected satisfaction with life ten years in the future.

Chi-square analyses were used to assess differences among the three groups in demographic characteristics of the respondents, factors which attracted residents, and factors which would cause the residents to move away from the community. Three one way analyses of variance to determine differences among the three groups in satisfaction with life today, satisfaction with life today compared to ten years ago, and expected satisfaction with life ten years in the future.

Results

Chi-square analysis of the demographic characteristics of respondents in each of the three categories of residential tenure (PLAN TO STAY, UNDECIDED, PLAN TO LEAVE) revealed no significant differences among the three groups. In fact, there were remarkable similarities among the three groups and the pattern of responses for each group was also similar to the pattern of responses for the project sample, as a whole.

Chi-square analyses also revealed that planned tenure in a retirement community was not dependent on factors that attracted retirees to the area. No statistically significant differences in factors that attracted retirees to the Lake Topaz area were found among respondents in the three categories of residential tenure.

Chi-square analyses were again used to evaluate whether planned tenure in a rural retirement area was dependent on factors that would affect retention of retirees in the area. Respondents in the three levels of residential tenure were not found to differ significantly in factors which would keep them in the Lake Topaz area.

Analyses of variance were used to assess differences in residential tenure according to life satisfaction today, ten years ago and ten years into the future. As can be seen in Tables 2 and 3, significant effects for two of the variables were found: life satisfaction today, F(2, 252)=7.788, p=.0002 and life satisfaction today compared with ten years ago, F(2, 264)=4.552, p=.016. These results provide evidence that there was a significant difference among the three groups of respondents in their perceived life satisfaction today, and today compared to ten years ago, but not their expected life satisfaction in the future.

TABLE 2. Results of Analyses of Variance of Life Satisfaction Today for Three Groups of Respondents: Those Who Plan to Stay, Those Undecided, and Those Who Plan to Leave the Lake Topaz Area.

Source	DF	Squares	Sum of Squares	Sum of Ratio	F Prob
Life Satisfaction Today	2	7.788	3.894	8.917	.0002
Within Groups	250	109.176	.4367		
Total	252	116.964			

Group contrasts were used to determine the source of the difference in the overall F. Those who plan to move were determined to be different from those who plan to stay or were undecided about staying in the Lake Topaz area, using LSD analyses and the p<.05 level of significance. Respondents who plan to leave the area reported that they were less satisfied with life today compared to ten years ago than were respondents who plan to stay or are undecided about staying in the Lake Topaz area.

TABLE 3. Results of Analyses of Variance of Life Satisfaction Today Compared with Ten Years Ago for Three Groups of Respondents: Those Who Plan to Stay, Those Who Are Undecided, and Those Who Plan to Leave the Lake Topaz Area.

Source	DF	Sum of Squares	Mean Square	F Ratio	F Prob
Life Satisfaction Today Compared to Ten Years Ago	2	4.5524	2.2762	4.214	.0158
Within Groups	262	141.5080	.5401		
Total	264	146.0604			

The finding that there were no significant differences among retirees in factors that attracted them to Lake Topaz and factors which would motivate them to leave the area was unexpected. Because the retirees were so similar, their responses were rank ordered to gain descriptive information about their motivation for living in the Lake Topaz area. Table 4 lists ranked percentages of responses for factors that attracted respondents to the Lake Topaz area. Lack of congestion, better weather and lower crime rate ranked highest in the sample. The importance of these factors to respondents is congruent with the fact that most of the sample (77%) moved to the Lake Topaz area from Southern California metropolitan areas.

TABLE 4. Rank Order of Factors that Attract Retirees to the Lake Topaz Area.

	N	% of Sample	Rank
Lack of Congestion	181	67%	1
Better Way of Life	135	50%	2
Lower Crime Rate	114	42%	3
Lower Cost of Living	98	36%	4
Better Weather	92	34%	5
Better health	91	34%	6
Better Recreation	84	31%	7
Friends Here	54	20%	8

Table 5 lists ranked percentages of respondents who indicated they would move away from the Lake Topaz area because of community, family, or personal concerns. Half of the respondents (50%) would move away from the Lake Topaz area due to the wishes and desires of the spouse. The next largest percentage of respondents (38%)

said they would leave the Lake Topaz area because of a loss of a spouse. These residents do not seem to be looking toward the future. They are more concerned with today and not anticipating or planning on the changes that will be taking place ten years into the future. Personal concerns are more important than community concerns. The fact that the Lake Topaz area has no medical facilities is not of major concern at this point in time.

TABLE 5. Percentage of Respondents in Three Residential Tenure Categories Who Indicated They Would Move Away from the Lake Topaz Area Due to Community, Family or Personal Concerns.

Factors that would cause residents to move from the community	Plan to Stay (N=137)	Undecided (N=66)	Plan to Leave (N=67)
Community Concerns			
Growth in population	26%	20%	24%
Tax increase	34%	32%	25%
Water problems	39%	30%	31%
Lack of medical services	30%	32%	42%
Family Concerns			
Wishes & desires of spouse	51%	39%	58%
Need to care for elderly relative	5%	3%	6%
Need to care for younger relative	4%	5%	10%
Need to manage family property	4%	9%	10%
Personal Concerns			
Inability to drive car	32%	27%	27%
Inability to care for home	25%	21%	27%
Inability to care for self	36%	27%	24%
Loss of employment	2%	3%	3%
Loss of spouse	37%	32%	46%

Discussion

Most of the respondents migrated from urban areas in Southern California. Therefore, it was not too surprising that lack of congestion was the single most important factor which attracted them to the Lake Topaz area. About half were also looking for a better way of life and a lower crime rate. The least important factor for this sample was having friends and relatives in their new environment.

At least for this group of respondents, previous findings concerning the importance of friends and family in migration does not seem to be of primary importance. This group of retirees is very young and mobile. Conversation with the respondents in the course of collecting data revealed that they enjoy the flexibility of an independent lifestyle. Most traveled to visit family and friends in California and other nearby states.

The two most important factors that would cause the retirees to give up the lifestyle they enjoy in the Lake Topaz area and move away were wishes and desires of the spouse and loss of the spouse. Responses for care of extended family and the management of family property ranked lowest among this group. Loss of independence (e.g., ability to drive a car or care for self or home) ranked lower than water problems and tax increases, a surprising observation considering the lack of formal support services available in the community and surrounding areas. Apparently this group enjoys freedom, independence and good health and the realities of what life in the Lake Topaz area might be like in their later years, when the aging process takes its toll, have not yet been faced.

The only significant differences found among the three groups of respondents were satisfaction with life today and satisfaction with life today compared with the past. As would be expected, those who plan to leave the area are the least satisfied. While statistical significance was found for these variables, explained variance was so low that practical significance was nonexistent.

The most distinctive characteristic of this sample was the homogeneity of the three groups. Probability estimates would suggest that statistical significance would be found for some variables when thirty chi-square analyses were run but not one of the variables approached statistical significance.

Even though very few differences were found among the three groups of respondents, the theory that people move to improve quality of life was supported. Respondents did move to find better quality of life. However, for this group, quality of life in the present seemed to be most important. The present orientation of this group suggests that as losses occur with the aging process, motivation for another move will be felt unless support systems are developed within the community, among friends, and/or by the community itself. The age and health status of the respondents further suggests that they have left the responsibility of middle-age behind but have not yet entered the time of life when health declines markedly. Researchers need to investigate this phenomenon among other groups of retirees in urban as well as rural communities and among retirees who have different levels of income and education.

As the population of Lake Topaz ages, the community will either lose residents because of lack of services or the community may not be able to meet residents' needs unless the community and respondents plan for the future. It is obvious that those who plan to stay haven't faced the realities of aging in a community without formal support systems. When trying to deliver programs and services or trying to raise tax dollars to develop services, community leaders may have to deal with resistance and avoidance behavior among the retirees.

Trial programs to assess the level of resistance among residents and to develop strategies for helping residents cope with the aging process may be worthwhile.

The homogeneity of the retired population in the Lake Topaz area means that there will be a large cohort moving into old age at the same time which could create problems for both the community and its residents. However, this homogeneity is a factor which could be used to advantage in developing and delivering programs and target marketing goods and services to Lake Topaz residents.

Future research is needed to determine how this homogeneous retirement area differs from rural communities with residents who age in place and are integrated in the community with families at different stages of the life cycle. Of particular interest would be differences in the two types of communities in levels of interpersonal and community support, levels of interaction among generations, sense of community identity, and various aspects of life satisfaction.

Considering the fact that residents' responses gave little indication of concern for the implications of living in a retirement area with limited access to services, future research should also include an analysis of the economic resources of the residents. Economic considerations for future study could include residents' debt to asset ratio, net worth, and investment behavior in addition to their saving and consumption patterns.

Finally, it will be very important to follow the Lake Topaz retirement area residents using longitudinal research to see whether residents leave or stay as they age and/or become infirm. Will most of the present group of young retirees move on and be replaced by another young group of retirees or will many of the residents who plan to stay for a lifetime actually do so? For those who move, what will trigger the event? For those who stay, how will they cope with the aging process in a community that lacks support services? If the residents who plan to stay in the Lake Topaz area actually do, how will the community respond to the needs of these residents?

The results of this study have detailed the unique characteristics of the residents in the Lake Topaz area. Potential problems have been identified and many of the characteristics of the Lake Topaz area residents are known. This information will help community planners and other professionals to begin to develop long range plans for anticipating and meeting the needs of aging retirees in remote rural retirement communities such as Lake Topaz.

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REACTOR PAPER TO: LAKE TOPAZ RETIREMENT AREA: FACTORS THAT ATTRACT AND RETAIN RETIREES

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I was pleased to read this paper on an important and timely topic. The young-retired group is increasingly being viewed as an industry to be cultivated for economic development in rural areas, and this paper addresses important issues both for rural communities and the newly retired or about-to-retire populations as they as they make decisions which will affect their resources and their lives in retirement.

The concept of elderly mobility is addressed in this paper as a significant factor influencing communities that would like to attract newly retired people. However, the first warning I would issue is the possible inadequacy of current mobility statistics to assess the phenomenon of interest. Current data are based on change of address as an indication of mobility. However, movement into a medical facility, nursing home, or home of an adult child would be measured as "mobility" under the change of address criterion. With the growth in size and significance of the retired population in the U.S., mobility may need to be redefined so that more accurate indicators of the mobility phenomenon may be obtained for various purposes. While this paper is based on a sample of newly-mobile retirees which is clearly defined, we need to be careful not to overstate the size of the potential population of mobile elderly as these data are generalized.

The authors of this paper begin to conceptualize factors relating to retirees mobility in three categories: factors which attract retirees, those which retain them, and factors which may cause retirees to leave. They also point out that the relevant factors may differ by category. However, in implementing this model, it becomes clear that the measures used and the population surveyed need to be elaborated. I would like to see the authors make recommendations for refinement of their instrument based on this rather pragmatic and useful paradigm. For example, I question whether the model can be fully defined without interviewing both movers and non-movers, as well as successive movers, on a scale large enough to be able to control for personal factors as well as the environmental ones.

An example of personal factors which may be influencing results can be understood as one attempts to interpret the finding "wishes and desires of spouse" as a factor for planning to leave a retirement community after a short period of time. Such a response may be the result conflict with a spouse over the original decision to move, a change in the health or physical condition of a spouse, or a positive move to an even more desireable location, to mention a few possibilities. Results from an instrument which includes some historic episodes as well as future orientation could be more accurately interpreted.

The proximity of health and other services assumed to be important to the retired population is also used as a factor in the model to explain mobility of the elderly. However, in this study the proximity of medical facilities did not explain differences between those who planned to stay and those planning to move. The author expresses concern about the lack of future orientation on the part of the retirees in this community, since the nearest hospital is 36 miles away. One reason for this finding is the general good health of this young-retired group. However, it may make sense to encourage (or at least not discourage) retirees to plan successive moves to take advantage of special opportunities and needs may come into play in the 20 to 30 years that a growing share of our population will spend in retirement. To me it seems positive and healthy for young retirees who are in good health to be giving major consideration to life-style factors in their choice of a place to live. If medical service needs change in this retirement community, and the residents do age in place, there are alternatives for changing the service package in the community, or for encouraging moves to areas better equipped to provide the needed services. In any case, rural communities will need appropriate data upon which to make decisions for current and future demands on their resources. Communities may deliberately decide to invest in different aspects of recreation, industry, medical, shopping, or educational services, for example, thereby giving people choices for retirement living.

The point here is that we need to know more about the similarities and differences between movers and non-movers. For example, are people who move to a new community at retirement, likely to make additional moves? What factors influence these movers? How are they different from non-movers? How do community and family specific factors interact in the location decisions of retirees?

Efficient use of both individual and community resources probably rests on the existence of good information for long range planning. However, at the family level, we need to help people deal with probabilities. At the community level, both leadership development and sound planning are important factors in communities that are comprised primarily of retired citizens. Family/individual specific variables that influence mobility of retirees may be ones a community is incapable of responding to such as desire to relocate next to kin, climate requirements for health, or simply interest in experiencing a new environment. Research in the area of mobility of retirees needs to address the broad range of influences, so that better plans can be made by individuals and communities, in the short and long run.

REACTION TO "LAKE TOPAZ RETIREMENT AREA: FACTORS THAT ATTRACT AND RETAIN RETIREES"

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I applaud the authors' efforts to examine a retirement area that is not built on a self-contained "Sun Cities" model. Current retirees are pioneers: generations of adults who are generally healthy and living with greater economic security and longer without employment than any in the past. Sun Cities have their paved roads, organized activities, golf courses, and generally homogeneous inhabitants, serving a narrow spectrum of the population (FitzGerald, 1986). Age based communities are a relatively recent phenomenon, and Lake Topaz seems to have a unique place in this trend.

From what is written, Lake Topaz lacks many of the services and recreational amenities usually present in a retirement community. It is smaller in population, and its people have to drive at least 19 miles to reach communities with shopping or medical services, in contrast to populations of 10,000 or more retirees in planned communities that permit members to meet most needs without leaving the development. The lake and fishing seem to be the primary attractions in Topaz.

Because the authors indicated that more than three-fourths (78 percent) of the population consists of retirees from California, I guess that the area has been marketed in California, but the authors have not described the selling approach that may have been used or disclosed if a more general population was sought. Retirees in other studies have been reported to cite features described in developers' brochures when describing factors attracting them to a community, so this information is relevant to this study (FitzGerald, 1986).

With Lake Topaz being situated near the California border, I wonder if Nevada's lack of personal income tax was a motivating factor in this migration, although per capita state and local taxes were within 23 dollars of each other in 1986 (U.S. Bureau of the Census, 264, 1987). I could guess that rapid acceleration in real estate prices in California also encouraged out-state migration: sale and relocation to a less costly area could make more of the household's net worth accessible (O'Bryant & McGloshen, 1987). I could guess about the involvement of county and regional planning groups during the development of Lake Topaz, but, instead, I want to alert the authors to the importance of descriptions of context in community-based research. Such information can prevent the reader from making erroneous assumptions and encourage evaluation of the transferability of findings. I do, however, recognize the problems in including all of a thesis in a Western Regional presentation.

The Study

This study seems to be an examination of a population of retirees because I found no mention of sampling. I estimate that the authors had data from less than 30 percent (n = 274 persons in 209 households) of the retired population (1252 persons). I have no bases to decide if this information does represent that entire group.

The Instrument

As I read this paper, I wondered if the authors had isolated the reasons respondents would cite for moving to Lake Topaz or factors that would cause them to move from there. In such a unique community, a pretest with more open-ended questions could help to verify whether a different set of factors may have been involved.

Scaling that was used to measure life satisfaction was not described in the paper, and that omission does not permit the reader to examine the meaning of statistically significant findings. For example, I can observe more variance among those planning to move than among the other groups. I can surmise that a higher score means lower satisfaction from authors' comments, but it would be easier to interpret findings if the specific question, anchor terms, and range of scores were described.

If this study is to be redone, there are some controls that may be helpful. The authors have suggested measures of economic well-being other than annual income, and their was support in the literature for such inclusions (Kitt, Hampton, & Sain, 1983; Olson & Olson, 1986; & Tucker, 1981). I also suggest that the authors include length of residence at Lake Topaz, time reference, and previous geographic mobility as controls. Lake Topaz has existed for at least ten years, so residents can be expected to differ in their tenure. Length of residence has been observed to relate to housing satisfaction: although the observed pattern is a gradual decline across time, the pattern is sometimes reversed (Brink & Johnston, 1979). Because the authors expressed concern that it is short-sighted for retirees to choose a location lacking transportation and medical services necessary in the future, evaluation of decision makers' time reference could be helpful. It could be that younger, healthy retirees are willing to accept the risk of later relocation in exchange for current enjoyment, that Lake Topaz is looked upon as part of a series of moves rather than a "final" location.

Statistical Analysis

I am concerned that collapsing of categories of some variables may have artificially reduced the variation among respondents. The following examples may help clarify the meaning of this problem. Precision in the meaning of a variable is lost when those with nine years of schooling are combined with high school graduates and when those with one semester of college are in the same category with other who have earned doctorates. Similarly, the Bureau of Census usually reports age in 10-year categories (i.e. 45 - 54), but for some reason this study included one age category as people from 50 to 64 years. This technique of collapsing variables can make a group appear more homogeneous than it is and prevent comparisons with other studies. When unusual grouping are devised, the logic for such groupings should also be explained.

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[1] Affiliate faculty.

I expect to see a table of correlations when authors discuss relationships among variables, and I regret that none was included in my copy of the paper. Because correlations are the bases of other statistical analyses, they can provide readers with ideas to extend the research. I am pleased to know that these authors recognize that practical meaning can occur in the absence of statistical significance, but I hope that none of us imply cause and effect from the results of future chi square tests. For the future, I would be interested in a comparison of plans and satisfaction of respondents from the same household ($n \simeq 70$).

It is courageous for a recent master's recipient to share a paper at a professional meeting, and I am grateful to Leslie Brokaw for this sharing. The limitations of this study are typical of much of our research, and my intent has been to demonstrate ways in which research can have greater practical impact. This specific work has challenged me to rethink my perceptions of retirement communities, and I look forward to reading and hearing more work by Leslie Brokaw. I am also curious about Lake Topaz and its future as a retirement community. Planning and zoning agencies and developers, as well as potential residents, need information about retirement communities, and the longitudinal nature of the overall project was especially exciting.

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AN INTERACTIVE COMPUTER MODEL FOR ACHIEVING PERSONAL FINANCIAL GOALS

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Abstract

Personal financial planning receives significantly more attention today than a decade ago. Increased life expectancy and a more complex society heightens concern over the need to find the answers to fundamental personal financial questions such as: how much income can an individual expect (1) in the case of retirement; (2) in the case of a permanent disability; and (3) how much income can the surviving family expect in the case of the individual's death.

This paper presents a model developed by the authors that shows users the answers to the above questions. The model, based on Lotus 1-2-3, allows the user to manipulate various assumptions to determine how they affect the achievement of his or her financial goals. A major feature of the model is its interaction with the user. Personal financial variables are entered by the user in selected sections of the worksheet. The output -- easy-to-study charts and graphs -- is updated automatically each time the parameters are changed.

The model can instantaneously evaluate several scenarios consisting of alternative assumptions. The user can then compare the alternatives and choose the course of action that is best suited to achieve the desired financial objectives, or, in some instances, discover that the goals are unrealistic. The model can then be used to establish a more reasonable set of goals and the financial planning necessary to attain them.

Introduction

Personal financial planning involves the analysis, development, and implementation of a financial plan designed to achieve an individual's overall financial objectives (Verschoor, 1985). According to the International Association for Financial Planning (IAFP), the financial objectives that are of most interest to consumers include saving for retirement, providing for children's education, purchasing a new house, and providing for one's future financial security. The survey also showed that only one in four people expressed confidence in being able to achieve their financial goals. In particular, Americans are becoming increasingly concerned that they will outlive the money they put away for retirement. (Journal of Accountancy, 1988)

As individuals' financial opportunities and investment alternatives have become more complex, and the move to early retirement continues to gain popularity (Gitman and Joehnk, 1987), the need for financial planning has grown. The best example of this is the growth in the number of financial planners in the U.S. From a few hundred in the late 1970's, there are today more than 40,000 members of the IAFP.

Financial planners have responded to the need by consumers for a financial plan by producing plans that are, in the view of the authors, exceedingly complex and difficult to understand. What is needed is more emphasis on the obvious. Consumers need to know, in simple terms, the future consequences of their current savings plans and the results that can be achieved by changing assumptions.

For example, a person who is ten years or more away from retirement does not need the kind of detail often contained in financial planning models. What he needs is a general understanding about the consequences of his present living patterns in the event of retirement, death or disability and changes required to meet his goals for dealing with those eventualities. He needs, moreover, to play with the goals and compare their effects on his present and prospective living patterns to understand the trade-offs. The model discussed in this paper is directed toward meeting that need.

PURPOSE OF THIS PAPER

Using Lotus 1-2-3 on a personal computer, we have developed a comprehensive, interactive personal financial planning model. The model allows us to compare a variety of assumptions and determine how they affect the generation of future income in case of retirement, disability or death. A major feature of the model is its interactive nature. One set of assumptions is keyed into input sections on the worksheet. The output (tables and graphs) are updated each time the assumptions are changed. The individual can then compare the results of his financial projections under each alternative and choose the course of action that is best suited for him.

The model illustrates the results of the calculations by presenting them in both tabular and graphical formats. The results can be viewed

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The authors wish to acknowledge the assistance of Jeanne Klimowski in developing the macros for the spreadsheet and Theresa Piech in preparing the manuscript.

directly on the screen to locate the results the individual is trying to achieve. Combinations that seem best suited for the individual's needs can then be printed out and studied in more detail. This interactive model allows an individual to study several combinations in less time than would be possible to evaluate just one set of assumptions without the assistance of the computerized model.

The interactive financial model is a good tool for an individual to evaluate his financial goals using a home computer or for use by a financial planner to explain more clearly to clients why some combinations will work better than others. The financial planner can go through the assumption changes with the client who can see the results of their discussion immediately on the computer screen.

One major advantage of this interactive model lies in its speed: financial planning can be consolidated into one meeting -- instead of meeting with the client to collect his financial data and goals and then seeing him on a different occasion to discuss the results of processing the data. Minor adjustments to the financial plan can be easily handled by running another assumption set via spreadsheet analysis (i.e., rerun the model), instead of manually calculating another plan. Since the computerized models are easy to use and results are obtained quickly, the process of financial planning is streamlined and the time involved is minimized.

The use of computerized models, such as this one, should help to make financial planning more accessible to a greater number of people, either by using these models themselves (on personal computers) or by seeking help from professionals that use computerized models as part of their financial consulting practice.

FUNDAMENTAL FINANCIAL QUESTIONS

In the following sections of this paper we will illustrate the specific financial questions that our model will answer, as well as provide the output to the calculations that were performed for a hypothetical client.

1. Retirement

(a) Based on today's net worth, projected savings rate and expected rates of return, what income can be expected at various retirement ages?

(b) Alternatively, given a retirement income goal, what combinations of rates of return, annual savings and earning asset composition will provide the desired income?

2. Disability

(a) In case of disability, how much income will be available?

(b) Given projected income and income goal, how much additional disability insurance is required?

3. Death

(a) In case of death, how much income will be available to the surviving family?

(b) Given projected income and income goal, how much additional life insurance is required?

4. Estate Value

What will be the value of the estate (net worth) over time?

5. Risk

As a risk indicator, how is the family's portfolio diversified among major investment categories?

A financial plan that answers the above questions will provide an individual with the basic information to adopt a strategy to achieve personal financial goals and objectives.

Model Requirements and Assumptions: An Illustration

Individual Plan

The model applies to an individual. A husband and wife must have two plans to account for the contingency of disability or death of one and the productive survival of the other. The retirement aspects of the model can accommodate the retirement of both. In our illustration, the plan has been prepared for Mr. Sample. The output illustrates income in case of his retirement (including Mrs. Sample's retirement income), his disability (including Mrs. Sample's continued earned income) and his death (including Mrs. Sample's continued earned income).

Inflation

Inflation is not considered as a separate input variable. All values are calculated in today's dollars. We believe most people can relate much better to their desired income goals in terms of today's dollars rather than an inflated amount, and inflation can be considered by adjusting expected rates of return. Assumptions regarding rates of return on investment, therefore, must be stated in real and not inflated percentages. The rate of return on long-term U. S. Treasury obligations at the time of this writing is about 9.5%, but approximately 5% is for an inflation premium. The model would use 4.5% as the rate of return for such investments, before consideration of income taxes.

Income Taxes

Rates of return on investment, additional savings and most input items must be stated in after-tax terms, since no income tax factor is used as an input item. The rate of 9.5% on long-term Treasury obligations, therefore, would be stated at 1.175%, after allowing for income taxes of 35% and inflation of 5%. If the income were sheltered, for example in a quali-

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fied retirement plan, the rate would be 4.5%.

Variables for Input

The variables for input are shown in Appendix A and commented upon in the following paragraphs.

1. Assets Other Than Rental Real Estate

Income-Earning Assets. Assets include interest-earning checking and savings accounts, stocks that pay dividends, bonds, etc. Assets are listed at their current market values.

Non-Earning Assets. Not all assets of the family will generate disposable income. For example, the home, household furnishings and automobiles will not generate spendable income for the family. These assets include the personal residence, automobiles and household furnishings.

2. Rental Real Estate

Income from rental properties is one component of the future income stream to be considered. The Samples own three income-producing properties which they lease to tenants on an annual basis. Each property requires separate data for input (estimated market value, rate of appreciation, current loan balance, annual percentage rate and monthly payment).

3. Estimated Annual Savings (Excluding Defined Benefit Pension Contributions)

We first need to estimate the annual savings that can be accumulated until retirement. We have established four different periods with separate savings levels. We begin with three five-year periods and conclude with a fourth period which continues to retirement. This allows flexibility in the model for those individuals who are able to increase their savings levels over time. Since the Samples expect to have some increases in real salary in the future and believe they will be able to save more in future years, their expected savings each period are expected to grow.

4. Mortgage Loan Information

The Sample family has two mortgages on their residence. Each mortgage requires separate input of the loan balance, annual percentage rate and monthly payment.

5. Annual Income Goals

Separate annual income goals must be established for disability, death and retirement.

6. Rate of Return Earned Until Retirement (after Reductions for Inflation)

The rate of return on assets is the real rate of return after consideration of taxes as explained in the Assumption section above.

7. - 10. Present Ages, Retirement Age and Graph Data

Age of the husband and wife at this point and ages at which they are to retire must be entered into the assumption section. The "graph date to age" item defines the age to use as the ending point for the projections to be graphed.

11. Income from Disability Insurance

Enter the disability insurance information for Mr. Sample.

12. Life Insurance Face Value

The face value of the life insurance policy is input here. Since the policy is a term insurance policy, it has no cash surrender value.

13. Wife's Income in Case of Death or Disability of Spouse

Mrs. Sample's income is estimated as $20,000.

14. Percentage Discount on Sale of Business Equity in Case of Death or Disability

In the event that a business equity must be sold to meet financial contingencies, it is likely that the sale will be at a significant discount from market value.

15. Average Combined Rate of Return and Capital Consumption

This is the estimated real rate of return earned on assets after retirement, disability, unemployment or death plus the rate of capital consumed.

16. Maximum Funds To Be Invested In Non-Earning Assets

This variable addresses the question of how much to invest in home equity, etc., in case of retirement, disability or death. Any equity in excess of the particular amount input is to be invested in earning assets.

17. Defined Benefit Retirement Income

Income from pension plans is another parameter considered in this model. Appendix A provides a list of pension plan income for Mr. Sample under the assumption that he retires, is disabled or dies at any age between 55 and 65. Only Mr. Sample has a defined benefit plan.

18. Social Security Benefits

Social Security benefits were estimated according to the maximum earnings amounts for a retired worker and a spouse.

The template of the worksheet provides areas to input the key information needed to establish the financial plan. Appendix A provides a complete list of the information that is entered into the model. Each time these variables are changed, the charts and graphs will automatically be updated. The ability of the model to assess instantaneously a large number of variables is the major advantage of using a computerized financial planning model.

Results

This section provides graphical displays that provide answers to the key financial planning questions identified earlier. Although our model will present either tabular or graphical displays of the results, we are providing graphical representations to provide the reader with a quick, clear understanding of the financial projections.

When using the model these results could be displayed on the screen or printed out. The best use of the model would be to enter variables and view the results on the screen until you obtain the desired combinations. Hard copies are then generated for the individual or financial planner for use in carrying out the decisions made during the planning process, such as purchasing additional life insurance. These variables can be "saved" on a diskette for the individual and then updated as they change over the years to make sure that the current financial plan will still lead to the original targeted goals. Again, if the plan shows deficiencies after incorporating the changes, the assumptions can be manipulated until an updated financial plan that meets the targeted goals is reestablished.

1. Retirement

(a) Based on today's net worth, projected savings and expected rates of return, what income can be expected at various ages?

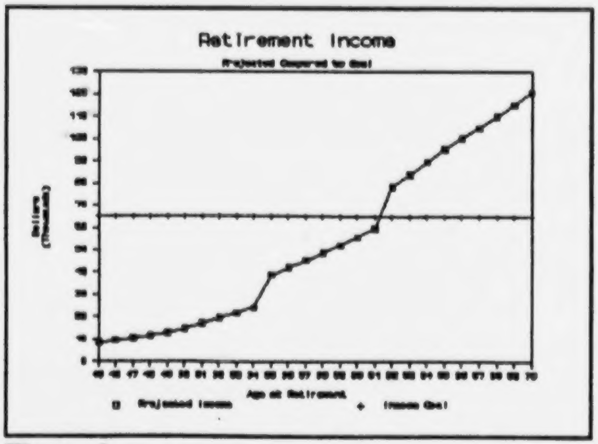

Figure 1

As can be seen in Figure 1, the point at which the income goal and projected income lines intersect will be the age at which the Samples can retire and meet their income goals. This occurs when the Samples are 61. Since the Samples' target retirement age is 62, they will be able to achieve this goal without adjusting their financial plan. The Samples current plan not only meets their retirement goal but also will allow them to retire a year earlier if they desire, or at least know that there is a little "padding" in their current plan.

In addition to investment income, the Samples have a defined benefit plan which will start generating retirement income at age 55. Figure 1 shows that the retirement income line increases at age 55 due to the defined benefit plan.

At age 62, there is another sharp increase in income. This jump is due to the Social Security Benefits. Figure 1 clearly shows that the longer the Samples wait to retire, the greater income they can anticipate.

(b) Alternatively, given a retirement income goal, what combinations of rates of return, annual savings and earning asset composition will provide the desired income?

Figure 1 depicts income earned from the Samples' savings, investments, and pension plans from age 45 to 70. The targeted income of $65,000 at retirement, however, is achieved before the target age of 62, so the combination of rates of return, annual savings and asset composition is the correct one for their situation.

2. Disability

(a) In case of permanent disability, how much income will be available?

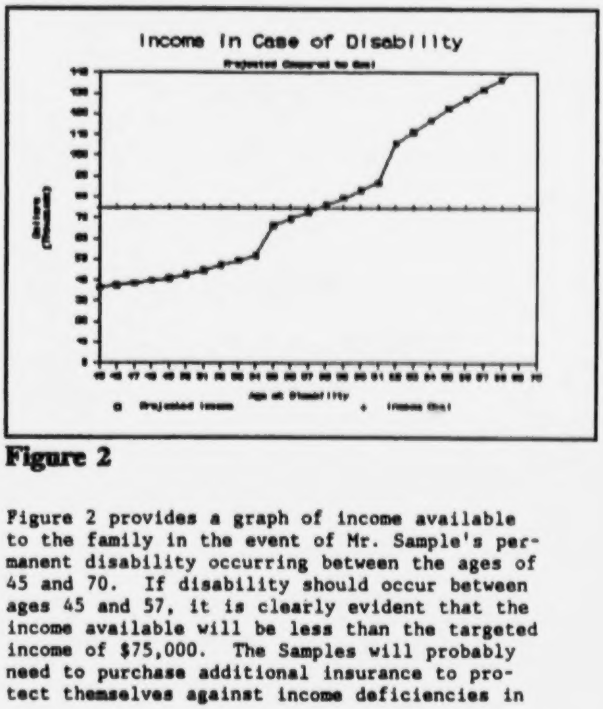

Figure 2

Figure 2 provides a graph of income available to the family in the event of Mr. Sample's permanent disability occurring between the ages of 45 and 70. If disability should occur between ages 45 and 57, it is clearly evident that the income available will be less than the targeted income of $75,000. The Samples will probably need to purchase additional insurance to protect themselves against income deficiencies in case of disability during this time span. If the disability occurs after age 57, the Samples' current financial plan will meet their income requirement. Alternatively, instead of curing the difference by obtaining additional insurance, the Samples could change other factors, such as lowering their standard of living, increasing the rate of return on investments, or increasing investments by reinvesting some of the equity in their home. In addition to replacing their income stream, the Samples must also make sure they purchase enough additional disability insurance to cover added costs of caring for the disabled person. Just how much additional insurance is needed is answered in question (b) below.

(b) Given projected income and income goal, how much additional disability insurance is required?

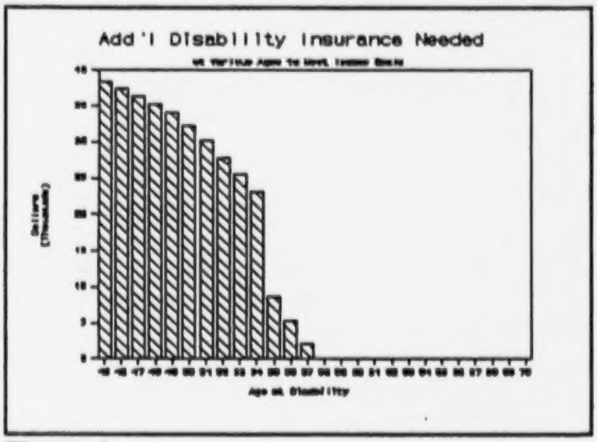

Figure 3

Figure 3 indicates the amount of disability insurance required at each age between 45 and 70. The amount of insurance needed decreases as Mr. Sample grows older, so a decreasing term policy would be appropriate. As was also seen in Figure 2, once Mr. Sample reaches 57, disability insurance is no longer needed. If coverage is not obtained for the years with an income deficiency, the Samples must face the reality of surviving on this reduced income if a disability occurs, or as mentioned in question 4, change one of the other parameters so that the income under their plan will be sufficient to their income needs in case of disability.

3. Death

(a) In case of death, how much income will be available to the surviving family?

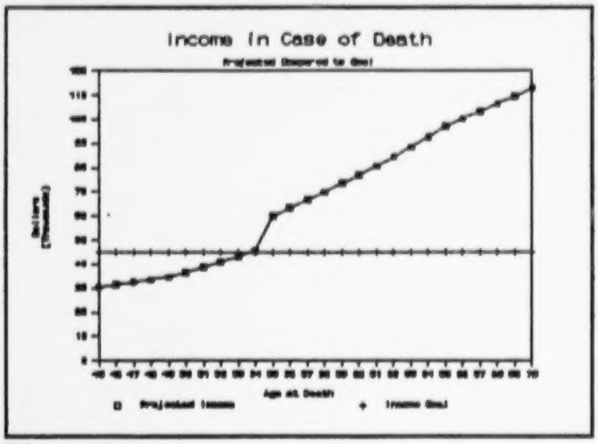

Figure 4

Figure 4 indicates the amount of income that will be available in the event of Mr. Sample's death between the ages of 45 and 70. If Mr. Sample's death occurs before age 54, the family will not have enough income to meet its current goal. This income deficiency could be corrected by purchasing adequate life insurance coverage. Similar to the case of disability, the Samples can purchase insurance to meet their income needs, reduce their target income goal, increase the rate of return or the amount of investments to reduce the discrepancy between the income actually required and income as shown in their current financial plans. The amount of additional insurance needed is addressed in the next question.

(b) Given projected income and income goal, how much additional life insurance is required?

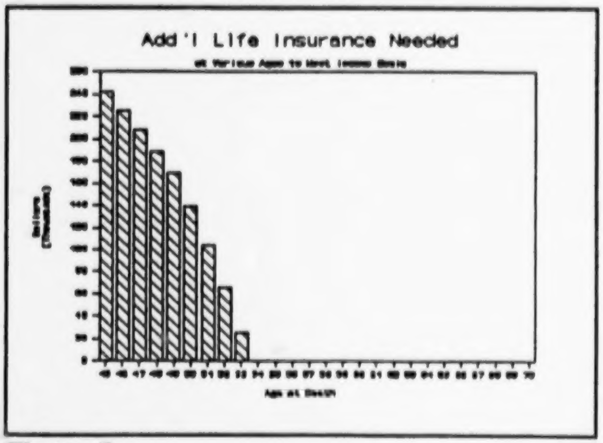

Figure 5

Figure 5 indicates how much additional life insurance is required each year between age 45 and 70. The decreasing amount of insurance needed suggests that a decreasing term insurance policy may be appropriate for Mr. and

Mrs. Sample. By purchasing the appropriate amount of additional life insurance, the Sample family would have sufficient income in the event of Mr. Sample's death. Again, the Samples can solve the income question by purchasing insurance, or changing other parameters, or a combination of both.

4. Estate Value

What will be the value of the estate (net worth) over time?

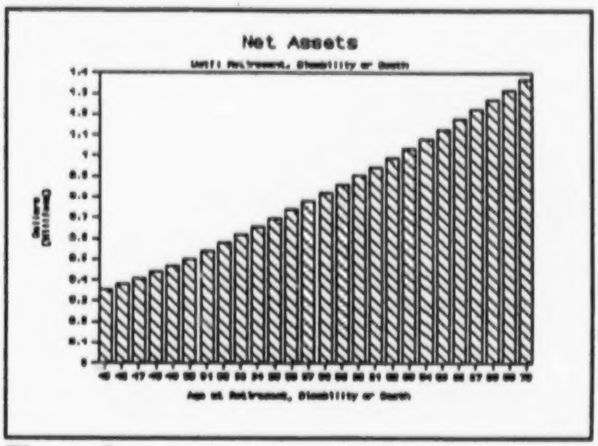

Figure 6

Figure 6 illustrates the growth in value of the Samples' estate covering the period of today to age 70.

Since income pays for expenses, net worth itself is not as important of a financial planning variable to focus on as the income needs. Although Figure 6 shows the steadily increased value of net worth of the Samples' assets, the income discussions of questions 1 through 3 have shown that the Samples have not adequately covered their income needs in case of retirement, death or disability. However, they will meet their retirement income goal.

5. Risk

As a risk indicator, how is the family's portfolio diversified among major investment categories?

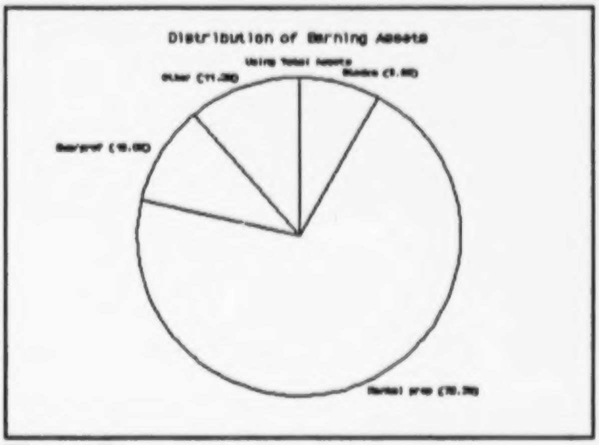

Figure 7

Figure 7 provides a proportional analysis of the Samples' income-earning assets. Categories of assets that comprise less than 15% of total assets are included in the "Other" category. Obviously, the key to their retirement income is the three pieces of real estate they own.

Summary

The simulation results for the Sample family have given insight to the areas in which their financial plan can be changed to meet their income requirement for retirement, disability or death.

Retirement. We discovered that, based on their present financial position and planned savings, the Samples will be able to retire at age 62 and have the retirement income they desire.

Permanent Disability or Death. The current financial plan shows an income deficiency in case of a disability which occurs before age 57, or a death before age 54. To eliminate these deficiencies, the Samples have the following alternatives:

(1) They can purchase the required amounts of disability and life insurance shown by the model as a means to achieve their goals;

(2) They can try to lower their standard of living and survive on the reduced income;

(3) They can try to increase the rate of return on income-earning assets; or

(4) Increase their investments by taking equity from their personal residence.

Now that the Samples are aware of the areas in which they can improve their financial planning they can make tentative decisions as to which alternatives they prefer. Using this new information the simulation can be run again to see how these decisions affected their target income goals. Since changing the information and obtaining results from the computer model can be done so quickly, the parameters can be changed as many times as needed until the Samples "zero in" on the right combination to obtain their targeted goals. The Samples could run such a simulation at home on a personal computer or in conjunction with a financial planner who could then change their investments according to the results of the computerized analysis.

Although this type of planning is done at one point in time for use over the years to come, parameters used in the model will probably change as the years pass -- income levels may change, money is received from a relative's estate, etc. As changes occur, the Samples can run the computer simulation again to make sure that their updated financial plan is still on target. Again, if the new plan is inadequate, the Samples can change various factors until they reach a new plan to meet their financial needs.

Conclusion

The personal financial planning industry has grown rapidly in recent years. Because individuals' financial needs and investment alternatives are becoming more complex, there is an increased need for personal financial planning services. A primary financial goal of individuals should be to establish the level of income necessary in the case of a major event such as retirement, permanent disability, or death. Given the goal, individuals then need a financial plan to answer questions such as how much to save each year to provide adequate income upon retirement, and how the family's financial requirements change in case of death or disability.

We have demonstrated the power of using an interactive computer simulation to help answer key financial planning questions. The interactive feature allowed us to evaluate several alternative assumptions and strategies. We were able to identify quickly those strategies that would permit the achievement of specific income goals in the event of retirement, disability, or death.

As personal finances become more complex, the need for such interactive, computer-assisted solutions to personal financial planning problems can only continue to increase in importance and usage.

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Appendix A
Variables

Item No.	Description	Assumed Value
1.	Assets	
	(a) Checking account balances	$2,000
	(b) Savings and money market account balances	$4,000
	(c) Bonds, mortgages, etc.	$8,000
	(d) Common stocks	$26,000
	(e) Retirement plans (except defined benefit)	$9,000
	(f) Rental real estate	See no. 2 below
	(g) Limited partnership interests	$12,000
	(h) Equity in business or profession	$32,000
	(i) Insurance cash values	$3,000
	(j) Additional savings/ lump sums	See no. 3 below
	(k) Non-earning assets	
	Personal residence	$175,000
	Automobiles, household furnishings, etc.	$35,000
2.	Rental Real Estate	
	Property 1:	
	(a) Estimated market value	$80,000
	(b) Rate of appreciation and cash flow	1.5%
	(c) Current loan balance	$60,000
	(d) Annual percentage rate	11%
	(e) Monthly payment	$800
	Property 2:	
	(a) Estimated market value	$50,000
	(b) Rate of appreciation and cash flow	.5%
	(c) Current loan balance	$35,000
	(d) Annual percentage rate	8.50%
	(e) Monthly payment	$350
	Property 3:	
	(a) Estimated market value	$95,000
	(b) Rate of appreciation and cash flow	1%
	(c) Current loan balance	$80,000
	(d) Annual percentage rate	9.50%
	(e) Monthly payment	$750

Property 4:

(a) Estimated market value	N/A
(b) Rate of appreciation and cash flow	N/A
(c) Current loan balance	N/A
(d) Annual percentage rate	N/A
(e) Monthly payment	N/A

3. Estimated annual savings (excluding defined benefit pension contributions):

(a) First 5 years	$5,000
(b) Next 5 years	$7,000
(c) Next 5 years	$9,000
(d) Thereafter	$10,000

4. Mortgage loan information:

First mortgage:

(a) 1st mortgage, unpaid balance	$120,000
(b) Annual percentage rate	10%
(c) Monthly loan payment	$1,053

Second mortgage:

(a) 1st mortgage, unpaid balance	$25,000
(b) Annual percentage rate	11%
(c) Monthly loan payment	$400

5. Annual income goals

(a) At retirement	$65,000
(b) In case of immediate death	$45,000
(c) In case of permanent disability	$75,000

6. Rate of return earned until retirement (after reductions for inflation):

(a) Passbook savings and money market accounts	2%
(b) Bonds and mortgages, etc.	4%
(c) Common stocks	5%
(d) Retirement plans (excluding defined benefit plans)	6%
(e) Rental properties	See no. 2 above
(f) Limited partnership interests	6%
(g) Equity in business or profession	3%
(h) Insurance cash values	3%
(i) Additional savings/lump sums	4%
(j) Rate of increase in equity in personal residence	2%

7. Present age of Mr. Sample 45

8. Present age of Spouse 45

9. Anticipated age of retirement 62

10. Graph data to age 70

11. Income from disability insurance $9,000

12. Life insurance face value $50,000

13. Spouse's income in case of death or disability of Mr. Sample $20,000

14. Percentage discount on sale of business equity in case of death or disability 50%

15. Average combined rate of return and capital consumption in case of:

(a) Retirement	6%
(b) Disability	6%
(c) Death	8%

16. Maximum funds to be invested in non-earning assets (e.g. personal residence) in the case of:

(a) Retirement	$250,000
(b) Disability or unemployment	$250,000
(c) Death	$250,000

17. Defined benefit income if Mr. Sample retires, is disabled or dies at age:

(a) 55	$12,000
(b) 56	$12,840
(c) 57	$13,740
(d) 58	$14,700
(e) 59	$15,730
(f) 60	$16,830
(g) 61	$18,010
(h) 62	$19,270
(i) 63	$20,620
(j) 64	$22,060
(k) 65	$23,600

18. Social Security benefits were estimated according to the maximum earnings amounts for a retired worker and spouse.

AN INTERACTIVE SIMULATION APPROACH TO ACHIEVING FINANCIAL GOALS

Harold Dilbeck, Ph.D., CPPA
John Kinds, D.B.A., C.P.A.
Ricardo Ulivi, Ph.D.

Response by John R. Burton, University of Utah

Being a good consumerist, I will begin my remarks with three caveats: 1) I claim little expertise in Financial Planning, 2) Even with what I do know about financial planning, I am not favorably disposed to what I call, "financial planning by the numbers," and 3) I have not had any direct experience with any of the several computer generated financial plans currently on the market.

What is Wrong with Financial Planning with Computers?

I agree with the authors that with changes in investment and tax laws and with the general affluence of many Americans, there is a need for greater emphasis on financial planning. There have been many professionals, e.g. accountants, lawyers, insurance salespeople, jumping on the financial planner bandwagon. As long ago as 1973, an insurance agent completed a computer assisted financial plan for me. Of course this plan concluded I needed a lot more life insurance. This bandwagon effect has now spread to higher education where departments and colleges such as home economics and business have developed curriculum to train financial planners. Yet we as academicians must be constantly vigilant that we are serving our students well when we train them for this relatively new profession. We owe it to our students to give them as broad an education as possible in financial planning. This means going beyond teaching the difference between preferred stock and common stock, the pros and cons of mutual funds, and what future value means. It is more than teaching them how much a client would need to save and invest each year to achieve a goal of a specific amount of liquid assets. Not only do we need to teach them the basic concepts of finance with its underlying economic principles, and counselling skills, we also need to educate them to be objective and ethical.

As part of the teaching of financial planning, there are many formulas to derive such information as future value and rates of returns. The student should have a conceptual knowledge of these formulas, however, they should not have to spend long hours in the tedious computation demanded by these formulas. This is where a program such as the one developed by these authors becomes a valuable tool. It is a tool that makes these computations fast and accurate. Because of the speed, several iterations can be calculated for each scenario to examine and compare many of the "what ifs." In addition, this program makes the graphic results of these computations attractive and easy to understand.

However, I see several problems with most computer financial planning programs. Generally they are too narrow and too sterile. Usually, they do little more than speed up what one could do with pencil, paper, and hand calculator. In addition, being a "computer generated plan," one of the principle dangers is they often give an aura of authenticity. Since they are little more than a quick and convenient way to do the arithmetic, they are no more accurate than the assumptions of the client and the planner. If these assumptions are wrong, not only are the results incorrect, the results are more likely to be accepted because they came from an "infallible" computer. For example, in this paper a series of assumptions was made for the Sample family. Interest rates and returns on investments were assumed. Inflation rates were assumed. Constancy of tax laws were assumed. While reading these assumptions, I could not help but think what different numbers would have been used if this plan were done in the inflationary period of the late 1970s. I am reminded of my years of teaching data processing where one of the major concepts I taught was GIGO--Garbage In, Garbage Out. Our problem as educators is in the quality control of the informational input to the financial planning computer programs.

When I examine these programs, certain questions often linger in my mind. How much do these programs replace the "human element" in planning? Do these financial planning programs encourage planner laziness? That is, the planner takes the assumptions of the client and other facts, inputs them, and then hands the client a printout along with the bill. Do these programs make "experts" out of people who know little more than how to input information? Can anyone call him or herself a financial planner because they know a financial planning program? Or are these programs tools to take the tedium and arithmetic errors out of the planning process and therefore give the planner more time to work on the more human elements of financial planning? I hope it is the latter.

Comments Specific to "An Interactive Simulation Approach"

[This response was originally written for a substantially different paper than the one that was presented at the Conference. Although adjustments were made in this response, some of the comments may pertain more to the originally reviewed paper.]

I found it somewhat difficult to review this paper. Unlike a typical refereed paper, there was no empirical research presented, no theories tested, no new concepts opened for debate, and no family management related policy or programs evaluated. What is presented in this paper is a series of financial planning questions pertaining to the three planning functions that are addressed by an arithmetic computer program. In addition, this particular paper does not make comparisons of the authors' program to others, nor does it acknowledge that other programs exist. This latter omission is a serious problem.

The authors state that the purpose of their paper is to illustrate a computerized simulation approach to show people how to achieve their financial goals. This may be an overstatement since, for example, my financial goal would be to retire next year with an income of $100,000 per year, but my income and asset numbers do not add up, therefore, this program will not assist me in achieving this goal. To be more accurate, this program is a computerized simulation approach that will show a person if her or his goals are mathematically realistic, but not necessarily conceptually realistic.

This program omits some essential variables, that if included, would make the output more accurate. The program needs to be expanded to account for these missing variables. An important one for the Sample family is the ages of the children. (The originally reviewed paper mentioned children, this paper does not indicate whether or not there are children present in the household. My response assumes there are children). The information on the year of the empty nest for the Samples is critical in planning their income needs. These needs are theoretically reduced when the children no longer are dependent. Also, for some reason, this program omitted when the mortgage on the residence would be fully paid off. This certainly would affect future housing costs and the income needs. A critical flaw is that this program generally appears to look at income in isolation from expenses. To be more comprehensive, this program needs to factor in the knowledge that living is usually cheaper when a person does not work and that there are certain tax advantages when living on disability and retirement income. There may be additional costs to retirement and disability, such as individual medical insurance, but these are not integrated into this program either. The result of these omissions will diminish the value of the output even if the inflation and other assumptions are relatively accurate. Another serious problem is that the financial plan for Mr. and Mrs. Sample should be better integrated. They cannot be treated as mutually exclusive financial entities in the household.

Proposal for a More Comprehensive Financial Planning Program

As I read the paper I realized that a financial planning program should go beyond the simple arithmetic calculations that merely give the client charts and graphs with minimal analysis. Using the Sample family as an illustration, suggestions are made on how this financial planning program might be enhanced by giving the client information that would normally be provided by a competent financial advisor. This additional information would be displayed on the printout along with the charts and graphs. In this way, the client would have additional important information juxtaposed next to the quantitive data. Also, if the advisor is less than fully competent, this program would help compensate for his or her deficiencies.

First, I would have the computer program analyze the stated goals of the client. Subsequent to the analysis, the program would ask the client a series of questions that might give a broader perspective of total financial planning program and stimulate the client to reevaluate her or his goals if warranted.

When the IRS computers review a tax return, their program searches for extraordinary expenses among other things. When the IRS computer spots unusual entries, it triggers an alert for the auditors. For example, a red flag went up when I listed $220,000 for my sabbatical expenses in Tahiti. A financial planning program could do the same thing. When a person's financial goals seem very atypical or unrealistic, the program could trigger some basic questions for the client to consider. There are several atypical aspects in the Sample family financial plan. If their plan were to be run through my proposed program, the following questions might be triggered:

1. Why are you insuring Mrs. Sample for less than Mr. Sample if she is being insured at all? How much less value does she have to the family than Mr. Sample? (If one spouse were a homemaker, it might even list the economic value of a homemaker).

2. Why does your life insurance program not take into account the reduced need for insurance when there are fewer persons who are relying on the insured? Why is any insurance necessary for either Mr. or Mrs. Sample after the children leave home?

3. Why do you want the stated amount of projected income after retirement when job expenses will be eliminated, taxes will be lower, housing will be cheaper, household size will be smaller, and there is little need for savings for retirement after retirement?

4. Why is so much disability income necessary when there are tax benefits and less job expenses when disabled?

5. Why did you not factor in the cost of education for children? The authors quoted Verschoor

as stating the providing for children's education was a financial consideration of most interest to consumers.

6. Why is there not a consideration of investment in human capital in order to increase economic well-being? Will the skills of both Mrs. and Mr. Sample be marketable in future years?

7. Why do you wish to sacrifice so much of your current income in order for so much financial security, if and when any of the events occur? What are you sacrificing now so you will be more secure in the future? Do you feel that you will get more satisfaction out of each dollar after 61 than you will before 61?

8. If Asset (i) pertains to the cash value of whole life insurance, why is this not converted to an investment with a higher return?

There are probably other questions for the Samples that a comprehensive financial planning program would trigger, however, I believe the point has been made with this limited list. In addition, my computerized financial plan would give the clients other things to think about that may have an effect on their planning. Whereas the above questions were triggered by the specifics of the Sample's financial plan, the following limited sample of questions would be more generic to many, if not all, clients.

1. How will your plan be affected by a marital breakup?

2. How important is it for you to leave an estate to your heirs?

3. How does your plan account for unforeseen events such as loss of job, job transfer, unplanned pregnancy, dependency of parents or other relatives?

4. What will you do if your retirement plan goes "belly up," your investments, even the ones you considered "safe" go sour, your insurance plans do not pay off, and/or there is rapid inflation, depression, or stagflation?

Again, there are probably many more generic questions than listed here that would give the client food for thought.

Ideally, any such financial planning program could be improved substantially if the degree of risk avoidance of the client and the degree to which the client is interested in consuming in the future as opposed to the present could be quantified and factored into the program. Either a risk avoidance scale could be constructed or there may already be some in published forms in other disciplines. If risk avoidance were factored into the program, then the triggering mechanism and client feedback could be appropriately altered for each individual. The results of such a scale would make the interpretation of Figure 7 more valuable.

SUMMARY

In summary, there is a need for computers in financial planning. One thing that even a purely arithmetic computer program can do is the mathematical manipulations quickly and accurately. Because the student will not have to worry about formulas and calculations, he or she will have more time and motivation to think of the implications and consequences of their plans. However, financial planning needs go beyond processing numbers. As stated by the authors of the paper, personal financial planning involves analysis. This includes analysis of the goals and processes of achieving the goals of the family. The financial plans generated by these programs need to make the clients aware of possible fallacies in their goals and in their methods of achieving them. In short, financial planning programs need to be educational tools to help people consider potential courses of life events and their possible consequences. Because they are educational tools that go beyond simple number-crunching, it is the responsibility of family resource management professionals to be involved in their creation both for the benefit of their students and for the clients of their students.

RESPONSE TO "INTERACTIVE SIMULATION APPROACH TO ACHIEVING FINANCIAL GOALS"

Audrey L. Peterson[1]

I would say at the outset that the authors of this paper have identified an area of financial management which increasingly is creating anxiety and stress for families, and as such the topic is a good fit for the theme of this conference. Not only is stress created by the complexities and unknowns involved in adequate long-term financial planning for the events of retirement, disability and/or death, but also by the advent of high technology into the decision-making process. When responses are computer generated, we sometimes don't totally understand and therefore don't trust the answers we get, or we attribute to the computer an aura of magic and place too much faith in the numbers obtained. To regain a sense of control in our decisions we have to realize the appropriateness and limitations of the computer as a tool. Even a computerized budgeting program is not helpful unless one has some longhand experience with the premises on which it is based, and has a clear enough understanding of one's goals to assess the implications of the results obtained. Out of context the numbers mean little and indeed can be misleading.

There is much in this paper with which I can agree, but the paper generates as well for me a certain amount of confusion. My comments will cluster around 3 major questions. The first two are related to the major focus of the paper. Is the primary intent of the authors to communicate content, i.e., to define a list of critical financial planning questions, external variables and personal data necessary to consider for effective long-term financial management? Or is the main focus the methodology the authors developed, which allows Lotus 1-2-3 to be used in this specific application?

If the intent of the paper is to identify the key financial planning questions which need to be addressed for effective decision-making, then I would assess the discussion in the paper as being somewhat superficial. Details need to be tightened and clarified and assumptions explained. For example, are the goals of the family stated in present value or future value? How is "value of the estate" defined? What is the basis for the selection of specific inflation rates or rates of return to be factored into the analysis? Why is there no assessment for the impact of Social Security on long-term needs? How are tax implications assessed?

My major conern here, however, relates to the issue of the context of these questions. I see no clear rationale or avenue for factoring in a particular individual's or family's target goals, or even for determining how much those goals should be. The inclusion of appropriate and logical questions is critical to the accuracy of the assessment, for we know that computer generated solutions are no better than the decision rules and assumptions inherent in the program. None of the key questions identified is accompanied by an explanation or rationale as to why it is included as part of the reasoning process. There is no opportunity to identify or to weight alternatives in a way which reflects individual assessments of value priorities, or considers human capital or home production impacts. What human factors exist that would influence or modify one's estimate of amounts needed for retirement, or adequate protection against disability or death?

One suggestion I would make would be to consider family lifeline or lifecycle data along with the quantified goals and assets. Such a lifeline would juxtapose ages of family members and predicted family composition at, say, 5 year intervals. You would thus know that between 2000 and 2005 you would be 45 or 50, your 2 kids would both be in college and you will probably have to pay for a wedding, your parents would be 78 and 82, and you have 10 years until your desired retirement. You would then have a clearer understanding of the intersection of specific personal factors at a given point in time and be able to assess financial needs with greater accuracy.

Second question: If the series of questions used was simply illustrative, and if the purpose of the paper was mainly to demonstrate the approach to financial planning using Lotus 1-2-3 as an interactive simulation, then I have another set of observations. First, this approach seems to be more of a sensitivity analysis than a true simulation. A simulation would set up a total future environment against which a series of alternative choices could be compared or carried out over time to their logical conclusions. A family lifeline actually could define aspects of a future environment if a simulation approach were desired.

I'm also a bit confused by the term "interactive." If it means that one can enter data, get an immediate reading, and then change data to see what effect the change makes, then I would have to admit that I thought that was what electronic spreadsheets do, by definition. My sense is that in this instance, "interactive" refers to the financial planning context. Rather than having the planner glean information from the client, take the data to the computer, and then discuss the outcomes with the client in a second interview, the client can sit at the computer with the planner and see what happens if the input variables are changed. The advantage of this approach would be greater understanding on the part of the client as to how the computer works and what the impacts are of various choices. However, if one is dealing with lots of variables and manipulating several, it could be very confusing to remember and understand which combinations get which results. I do like the idea of a true sensitivity analysis, though, where a person could determine which variable change would have the most significant impact on goal attainment.

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[1] Professor/Chair, Department of Home Economics, University of Montana

As a person who particularly enjoys new approaches in the classroom, my third question asks: who are the intended users or audience for this analysis tool? Is it to be used solely by financial planners as they work with clients? Or can it be made available for use by families or educators? Because of the need to enter current predictions for inflation or investment rates of return, I would suspect that individuals or families would need some professional advice to determine accurate predictors. How affordable or accessible is Lotus 1-2-3 for classroom applications and how much training would be necessary for students or teachers to use this tool? I also wonder what new knowledge this paper contributes. What is it that we as educators are to take from and do with this information in our work with students or adult audiences?

In summary, then, I had some problem interpreting direction and intent from this paper. I have concerns about the criteria by which the set of analysis questions was derived, questions about the uniqueness of the interactive/simulation nature of the program, and confusion about the potential for application and use by educators. I certainly agree, however, that the financial planning issues identified in this paper are important ones. They need to be addressed at an early stage to allow lead time for long-term compounding and for stress reduction through planning for potential crisis situations. Because computer processing relieves us of tedious calculation and guarantees mathematical accuracy, we are freed up to focus effort on the quality of the inputs into these kinds of programs. It is important that we do so.

THE ECONOMICS OF DIVORCE AND REMARRIAGE FOR RURAL FAMILIES

Barbara R. Rowe, Utah State University[1]
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ABSTRACT

This study examines the economic aspects of divorce and remarriage in a rural population. To the authors' knowledge, this is the first study in the U.S. to focus on the financial consequences of divorce for rural residents. The primary variables of interest were: types and dollar values of assets, asset division, alimony orders--their frequency, duration and adequacy; child custody and child support orders--their equity and adequacy; and the post-divorce economic well being of wives, husbands, and their children.

This article reports preliminary findings from the first study in the U.S. to focus on the financial aspects of divorce and remarriage in a rural population. All previous research on the economics of divorce has used urban and suburban residents. Case law suggests that the nature of assets, the division of marital property, as well as child support and alimony judgments may differ substantially in rural divorces (Argyle v. Argyle 1984; Haguewood v. Haguewood 1981). And, although the divorce rate is lower among rural families, the social stigma may be higher (Jensen 1985). Thus, this study contributes information on the broad question of rural/urban family differences and fills an important gap in the divorce literature.

The Economy of Rural Utah

During the time these divorces were being finalized, several key sectors of Utah's economy--mining, petroleum, and construction--had been negatively affected by a world wide reduction in energy and agricultural prices. After adjusting for inflation, wages had fallen for the last three years. Many farm families were facing economic hardship resulting from stagnant crop prices, falling land values and a shrinking export market (Lanpher et al. 1985).

Considerable evidence suggests that the economic consequences of the farm crisis were also affecting rural non-farm families where the economy was partially or totally dependent on the farm economy (Charlier 1985). Often this resulted in fewer employment opportunities or high unemployment in small rural communities. In 1985, eight of Utah's rural counties had unemployment rates above 10 percent, another six counties showed jobless figures at more than 12.4 percent (Labor Market Information Services 1986). Such financial distress can contribute to family problems including suicide and divorce (Bosc 1985).

Methodology

The sample was drawn from final divorce decrees for marriages lasting ten or more years filed between June 1985 and December 1986 in the Utah counties of Box Elder, Cache, Carbon, Emery, Sanpete, Sevier, Tooele, and Uintah. The sample was stratified by the "ten years or more" criteria to ensure sufficient assets to measure. Demographic data were collected from the vital statistics records of 420 divorce decrees. Data collection forms were then mailed to each of five field interviewers who went to his or her county courthouse and verified the demographic information recorded for each couple. Information from the court records on the dollar values of assets and debts, alimony, and child support orders was also collected.

In a previous study, researchers (Rowe 1986) found that divorced persons were reluctant to participate if they thought their former spouse would also be interviewed. Therefore, only one person from each couple was initially invited to participate. After a random start, males and females were selected in alternating fashion. If the prospective participant refused to participate or was not able to be located then the former spouse was contacted. In no cases were both husband and wife interviewed.

Thus, one partner from each divorced couple was mailed a letter informing them of the study and asking for their participation. For subjects with current phone listings, the interviewer for the county followed up the letter with a telephone call to arrange an interview. For persons for whom there was no current telephone listing, a stamped, addressed postcard was included in the letter so the person could indicate their interest in participating and a phone number where they could be contacted. Envelopes were stamped with "Do not forward--address correction requested" so any change of address could be returned and recorded. When a letter was returned with a change of address, another introductory letter was mailed to the new address and a postcard included regardless of any previous telephone listing. If a letter was returned "undeliverable," an introductory letter was mailed to the former spouse if his or her address was known. The interviewers then called potential respondents to schedule the interview. All interviews were conducted within 18 months of entry of the final divorce decree.

Interviewers were unable to contact 252 individuals because their telephone numbers changed since the last directory printing, they had no forwarding address, or they were unable to be reached by telephone after four attempts. Of the 168 individuals contacted, 37 refused to participate in the study. Face-to-face interviews were conducted with 131 recently divorced respondents, 92 women and 39 men. These respondents represented 31.2 percent of the original sample of 420. Their answers provided the information for this research.

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Characteristics of the Couples

The average ages of the interviewed group was 37.7 years for wives and 40.8 for husbands. Couples in this group had been married an average of 17 years. One hundred twenty-three families had from one to nine minor children, with an average of 2.9 children per family. There were no minor children in eight of the families.

This sample, relative to the nation as a whole, is slightly older and has been married slightly longer than most couples prior to divorce. In 1981, the median duration of marriage for couples getting divorced was seven years. However, since 1975 the increase in divorce among persons married for more than seven years has been significant. Over one-third of all divorces now involve couples married ten or more years, and 20 percent of all divorces involve couples married fifteen or more years. Since 1977, nearly one-half million divorces annually have been documented among people aged forty-five and older (National Center for Health Statistics 1985).

The median educational category for wives and husbands was "high school graduate." Forty-nine of the wives (37.4 percent) had attended trade school or had some college education as had 39 (29.8 percent) of the husbands. Nine of the wives (6.9 percent) and 11 of the husbands (8.4 percent) had earned a college degree; some of these respondents held graduate degrees as well. Thirty-two of the husbands (82.1 percent) were working at paid employment after the divorce as were 72 (78.3 percent) of the wives.

Income data collected included: 1) husband's income at the time of the divorce, 2) wife's income at the time of the divorce, 3) annual household income prior to the divorce, and 4) annual post-divorce household incomes for husbands and for wives. As shown by Table 1, more husbands than wives were in the highest income categories at the time of the divorce.

TABLE 1. Annual Income of Wives and Husbands at the Time of the Divorce

	Wives	%	Husbands	%
Less than $5,000	26	22.6	8	6.7
$5,000 to $9,999	22	19.1	3	2.5
$10,000 to $14,999	20	17.4	9	7.6
$15,000 to $19,999	13	11.3	3	2.5
$20,000 to $24,999	12	10.4	12	10.1
$25,000 to $29,999	6	5.2	11	9.2
$30,000 to $39,999	6	5.2	11	9.2
$40,000 to $49,999	5	4.3	20	16.8
$50,000 or more	5	4.3	42	35.3
TOTALS	115	100.0	119	100.0

Analysis of annual household income prior to the divorce (Table 2) indicates that 21.4 percent of the families had incomes of less than $20,000. Incomes between $20,000 and $25,000 were reported for 12.3 percent of the families, 40.6 percent had incomes from $25,000 to $40,000 and 25.2 percent had incomes of $40,000 or more. In 1985, the median income of Utah families was $27,000 (Utah Dept. of Health 1986).

TABLE 2. Annual Household Income Prior to the Divorce

	#	%
Less than $5,000	2	1.5
$5,000 to $9,999	7	5.4
$10,000 to $14,999	6	4.6
$15,000 to $19,999	13	10.0
$20,000 to $24,999	16	12.3
$25,000 to $29,999	19	14.6
$30,000 to $39,999	34	26.2
$40,000 to $49,999	12	9.2
$50,000 or more	21	16.2
TOTALS	130	100.0

Types and Dollar Values of Assets

Court records did not contain complete information about property values; only cases contested included dollar values. Consumer debts were reported in many cases, but outstanding mortgages only occasionally. Two methods of asset valuation had been identified in a prior study (Rowe 1986): objective (if some data such as an independent appraisal, property tax records, Blue Book, classified advertisements, retirement account statements, or bank statements were used), and subjective (if no data were used to arrive at a fair market value). It became apparent after just a few interviews that a third category was needed—"no value determined"—for many couples were dividing assets such as cars and furniture without first placing a monetary value on them. Assets by number and percent of families owning are shown in Table 3.

TABLE 3. Assets Acquired During Marriage

	#	%
Family home	112	85.5
Family farm	14	10.7
Other real property	31	23.6
Cars	128	97.5
Farm machinery	10	7.6
Other vehicles	59	55.0
Livestock	20	15.2
Furniture/appliances	125	95.5
Bank accounts	100	76.3
Stocks/bonds/investments	30	22.9
Business/professional practices	29	22.2
Life insurance with cash value	30	22.9
Pension/retirement account	51	38.9
Any other asset	43	32.8

The total value of assets reported by these divorcing couples ranged from $500 to $575,000 with a median $67,100. When outstanding mortgages, consumer debts, and real property liens were deducted from asset totals, the range was from a negative $97,999 to $230,000 with a median of $30,000.

The Settlement Process

There are four distributional issues that must be settled in a divorce: child custody/visitation, child support, alimony (spousal support) and division of property. Fifty-five couples (n = 41.9 percent) reported making these decisions themselves in "kitchen-table" negotiations. Twenty-three settlements (17.5 percent) were negotiated by attorneys while 43 couples (32.8 percent) brought their case to court where the presiding judge divided the assets.

In 50 cases (38.2 percent), both spouses had their own attorney. In 43 cases (32.8 percent), only one spouse was represented by an attorney. Twenty-nine couples (22.1 percent) used the same attorney and seven couples (5.3 percent) chose to file their divorce papers themselves with no record of attorney assistance.

Sixty-two participants (47.3 percent) believed that the input of each spouse was "equal or nearly equal" in the decision-making process. Forty-seven respondents (35.8 percent) indicated that the input was unequal, and 17 participants (12.9 percent) said that it was "neither equal nor unequal."

Division of Property

With few exceptions, the family home was the major asset (n = 103, 88 percent). Sixty wives (representing 58.2 percent of the couples owning houses) continued to live in the family residence after divorce, as did 19 husbands (18.4). Thirty-three couples (32 percent) either retained the home in joint ownership or sold the home and divided the proceeds. In five cases where the wife kept the house, the husband was awarded a lien or a promissory note for his share of the equity to be paid over time or when the house was sold. In five cases where the husband continued to live in the family home, it was also subject to an obligation to pay the wife for her share of the equity. There was a significant relationship between mothers' custody of minor children and retention of the family home. Wives were more likely to keep the family home when they had custody of minor children (F= 3.9691, p=.05; two-tailed t-test p=.02). The family home did not always follow the children--when fathers were custodial parents they did not necessarily keep the house.

Real property other than the family home was more often retained by husbands (19 cases) than by wives (5 cases). The value of the other real estate was divided between wife and husband in six cases.

Ownership of two cars was the norm for these divorcing couples and they divided them. When only one car was owned, nine wives and eight husbands kept it. If there were more than two cars, husbands usually retained all but one or two. (Thirty-two husbands retained multiple cars compared to eight wives.)

Sixty couples (46 percent) owned other vehicles such as a boat, camper, trailer, or motorcycle. Husbands kept the other vehicle in 39 cases, wives in only four. Furniture and household durables were divided by 66 couples (52.8 percent of the couples owning this asset). Wives retained all the household furnishings in 54 instances (41.2 percent).

Bank accounts were divided between husband and wife by 63 (63.6 percent) of the 99 couples owning this asset. Businesses and professional practices were retained by 22 husbands out of the 29 cases where this asset was owned. Four wives retained the business/professional practice and, in three instances, the equity in this asset was divided between husband and wife.

Pensions and retirement funds were most often kept by the titled owner, as were life insurance policies with a cash value. Twenty-four husbands (47 percent of the 51 couples owning this asset) having retirement benefits kept the full amount of these assets as did eight wives (12.3 percent). Nineteen couples divided the equity in the pension or retirement account.

Marital debts were usually divided between husband and wife, although husbands (51) were more likely to carry all or most of the marital debt than wives (24). The average debt load retained by husbands in this group was $19,384; the average amount of debts to be paid by wives was $16,309.

Alimony

Forty-two wives (32 percent) had post-divorce spousal support orders. Twenty of these orders (46.5 percent of the cases where alimony was awarded) were for a specified duration ranging from one year to 10 years with a mean of 3.2 years. Twenty-four wives (55.8 percent) received "permanent" support (for the lifetime of either spouse or remarriage/cohabitation of the recipient). One husband received a nominal $1/year award. The mean amount of alimony ordered was $304.13 a month, slightly less than the $446 poverty income guideline for a one-person household (Annual update . . ., 1986). Eleven wives (8.4 percent) received a property judgment other than family home equity which may be paid in periodic installments similar to alimony. At the time of the interview, in 27 cases (62.8 percent) where alimony was ordered, the full amount was reported as being paid or received every month. Twenty-five percent (11) of the sample having alimony awards reported never paying or receiving payments. Six respondents (13.6 percent) reported paying or receiving support "sometimes" or "rarely." Nationally, of the 15 percent of divorces where alimony was awarded, 73 percent of the obligees received at least some portion of their award, 27 percent received no payment at all (U.S. Bureau of Census 1987).

Decisions Pertaining to Children

In 104 of the 119 families having minor children, mothers had custody of one to six dependent children (87.4 percent). In 24 cases (20.1 percent), fathers received exclusive or shared physical custody of some dependent children (the range was one to four). (These totals add to more than 119 percent because of the number of cases involving split custody.) Ninety-seven fathers (80.6 percent of the families with minor children) were required to pay child support as were two mothers (1.6 percent). In 15 cases (14.3 percent), neither parent was obligated for child support, in four cases (3.4 percent), both paid. There appeared to be no uniform pattern in the specified dollar amount per month per child, the range was $1 to $500 per month. The mean amount awarded per child per month was $167.50, or about $5.50 a day.

Compliance with child support orders was higher than the national average. Sixty-two parents (60.2 percent of the 103 parents with child support orders) reported paying or receiving the full amount every month compared to 48 percent nationally. The remaining parents were split between those reporting child support was paid "sometimes" or "rarely" (26 parents or 25.2 percent); and eight parents (7.8 percent) who reported never receiving or paying child support—compared to a national average of 26 percent due payments who received nothing at all (U.S. Dept. of Census 1987).

Although the amount of child support and the compliance rate reported in this study appears high compared with national figures, it is important to recognize the national data are skewed toward low support values since support awards made ten or fifteen years ago are included in the averages. The data presented in this study were collected within 18 months of the divorce decree and represent support orders written in 1985 and 1986.

Post-Divorce Economic Well Being

In Table 1, the monthly incomes of wives and husbands at the time of the divorce were presented. Table 2 presented pre-divorce annual household incomes. Table 4 compares annual household income for husbands and wives following the divorce. These incomes have been adjusted for child support and/or alimony payments--the amounts have been subtracted from obligors' incomes and added to recipients' incomes. Income from new spouses or domestic associates has also been included.

The largest source of income for all respondents was earned income (51 wives and 27 husbands--56 and 67.5 percent respectively). Two husbands (5 percent) reported the largest source of their present income to be salary from a new spouse or domestic associate as did five wives (5.4 percent). Fourteen percent of the wives (n = 11) said welfare, AFDC or unemployment was the largest source of their income as did six percent of the husbands (n = 2). Twelve percent of the wives (n = 9) said child support and/or alimony was the largest source of their present income. Sixteen percent (n = 21) of the respondents in this sample had remarried within eighteen months of their divorce, eight men (20 percent of the husbands) and thirteen women (14.3 percent of the wives).

TABLE 4. "Adjusted" Post-Divorce Household Income of Wives and Husbands

	Wives	%	Husbands	%
Less than $5,000	11	13.4	5	13.2
$5,000 to $9,999	22	26.8	2	5.3
$10,000 to $14,999	17	20.7	3	7.9
$15,000 to $19,999	6	7.3	7	18.4
$20,000 to $24,999	14	17.1	5	13.2
$25,000 to $29,999	4	4.9	4	10.5
$30,000 to $39,999	4	4.9	9	23.7
$40,000 to $49,999	2	2.4	1	2.6
$50,000 or more	2	2.4	2	5.3
TOTALS	88	100.0	38	100.0

Discussion and Implications

Asset division

There was some evidence of gender typing in the allocation of property. Wives were more likely to be awarded the family home and the majority of household furnishings while husbands were more likely to retain businesses, other real property, and retirement accounts.

To determine if there were any significant differences in asset allocation by method of decision, the sample was divided into three groups: in one group (n = 55) the couple had structured their own property settlement; respondents in the second group (n = 43) had taken their case to court where the presiding judge had the major responsibility for award decisions; respondents in the third group (n = 30) had negotiated their property settlement through attorneys, mediated their disputes, or used some other method of resolution. When the couple structured their own property settlement, wives received average net assets (assets minus liabilities) of $29,748, husbands, $16,042. When the couple went to court, wives received average net assets of $36,009, husbands, $21,325. Wives in the third group received average net assets of $26,468, husbands $45,121.

Because of the variation in net assets awarded to wives and husbands in the three groups, another set of frequencies was tabulated using gross asset totals (excluding debts). When respondents structured their own property settlements, wives received average gross assets of $51,322, husbands $32,711. When respondents went to court, wives received average gross assets of $51,923, husbands $42,848. Wives in the third group (attorney negotiated, mediated or other) received average gross assets of $43,009, husbands, $71,276.

Even when divorcing wives were leaving their marriages with more assets than their husbands, it is important to realize the limited nature and value of these assets. Usually, all of the equity was tied up in houses, cars, and furniture. Seldom were provisions made to help the wife pay off the mortgage, meet insurance premiums and tax bills, or keep the house in repair. Retaining the family home also limitedgeographic mobility and employment opportunities. Given the low incomes of most of these divorced women, and a depressed rural economy, an eventual sale or foreclosure of the family home seems inevitable for many of them.

Alimony

The findings from this study support the conclusions of other researchers (McGraw, Sterin & Davis 1982; McLindon 1987; Rowe & Morrow 1988; Weitzman 1985; Wishik 1986) that relatively few wives receive alimony awards and that alimony recipients will benefit from their orders for short periods of time. Still, a greater portion of rural Utah women received alimony (32 percent) than California women (less than 20 percent), Ohio women (16 percent), Vermont women (7 percent), or women nationally (15 percent). This may be due to stratifying the sample by duration of marriage. All the marriages in this sample had lasted a minimum of ten years, whereas the studies in other states included marriages of shorter duration.

The relevant criterion for alimony in Utah is "to enable plaintiff (sic) to maintain as nearly as possible the standard of living enjoyed during the marriage and to prevent her from becoming a public charge" (Marchant v Marchant 1987). A comparison of Table 1 with Table 3 supports the conclusion that many of the divorced wives and their dependent children in this sample are living at much lower levels than they enjoyed during the marriage. The relatively low proportion and dollar value of support orders suggests that there is an expectation of self-sufficiency for these divorced women and a gap between the law's stated intent to provide support for divorced women with impaired earning capacities and economic reality.

Child Custody and Child Support

Mothers received custody in the overwhelming majority of cases although judicial preference for the mother was repealed in 1985. There were a few fathers (24, or 20.1 percent of the families with minor children) who were sole custodians or co-parents in split custody situations.

Child support was usually awarded if children were under the age of 18 and almost always it was fathers who were to pay, although two mothers were obligated for child support. The average amount of child support per child per month was $167.50.

The inadequacy of these support awards becomes clear when one measures them against the annual cost of raising children. At the time the majority of these divorces were finalized, the annual cost of raising a 10- or 11-year-old rural, nonfarm child (the average age of the minor children in this sample) in the West at a moderate cost level was $6,022, or $501.83 per month (Updated estimates. . ., 1986). Half of this monthly estimate is $250.91. Therefore, the average amount of child support was less than half the cost of raising the child. Child support amounts are rarely revised upward, in part because of the time and money-consuming process of the present system of modification. Since the cost of raising children increases with inflation and with the child's age, over time custodial parents are either paying more than half of the expense of raising their children or drastically reducing their children's level of living.

Post-Divorce Income

It is clear from the post-divorce incomes reported by these respondents that the economic impact of divorce on wives and husbands was vastly different. In the year prior to divorce, about seven percent of the families had annual incomes of $10,000 or less. In the first year following the divorce, these figures jump to 45.5 percent for women and 17.5 percent for men. These figures do not take into account the number of persons in each household (per capita income), although wives were more likely than husbands to have dependent children in their household and more likely to be sharing their post-divorce income with them.

The differential financial consequences of divorce for husbands and wives is largely the result of four factors: 1) the continuation of women's caretaker role for children, 2) women's limited earning potential as a result of gender and wage discrimination and human capital investment, 3) financially inadequate divorce settlements, and 4) the gender-specific roles assumed in traditional marriages.

1) The assumption that the mother is the natural and proper custodian of minor children after divorce has been so widely accepted that even when the maternal preference is eliminated from state statutes, mothers still retain custody in overwhelming numbers. It would be erroneous to attribute the overwhelming predominance of maternal custody awards to a sexist judiciary. In most cases, the divorcing couple decides (or takes it for granted) that the children should live with the mother. However, there is anecdotal evidence that the present system does discourage fathers from pursuing custody—the sincerely loving father will hesitate before putting his child through a bitterly contested court battle. The economic consequence of maternal custody is that in most cases the children are with the parent who usually has considerably lower labor market earnings and limited career opportunities. Child support does not make up the difference. The dollar value of, and compliance with, child support orders declines over time (Eckhardt 1968; Eden 1979). Until child support awards are based on what it truly costs to raise a child and rigorously enforced, maternal custody will continue to contribute to the "feminization of poverty."
2) Although women hold nearly 43 percent of all jobs in Utah, their incomes are typically half those of men. One reason is that gender dif-

ferences in occupation are greater in Utah than in the U.S.--more than 40 percent of women are concentrated in "pink collar" occupations, jobs which traditionally pay less (Goodman & Heaton 1986). The prospects for wives in this sample to increase their incomes are not promising. As noted earlier, 78 percent of these women were already employed. Of those unemployed women who do seek employment, the drastic reduction in income they have just experienced may well prompt them to accept the first job they are offered because they must support their families immediately and have no time for job training which would give them more choices in the job market. Alimony awards which are structured to provide funds for career counseling and full-time job training in the years immediately following divorce would do much to prepare wives for the economic self-sufficiency which the law now assumes.

Rural women are particularly vulnerable in this regard. Scanzoni and Arnett (1987) concluded that rural women's lower educational attainment and preference for gender role traditionalism hinders their opportunities to participate effectively in the paid labor force and limits the levels of economic inputs they are able to make to their families.

3) Most couples in this sample had not acquired sizable assets. Mean net assets for families in this sample was $89,571, most of it equity in a family home; although in some cases life insurance policies with a cash value, pensions, and equity in a business or professional practice were available for division. Wives fared better than husbands in terms of net assets in all but one category of division. However, the median amount of assets divided was so low that these rural women could expect to receive $30,000 or less in net assets. Far more important to their post-divorce economic well being and the well being of their dependent children was their own earning ability and transfer payments from the former spouse in the form of alimony and/or child support. As has been discussed above, not enough support is awarded, awards are premised on the belief that one amount will do for all time, what is awarded is not paid, and enforcement procedures are lengthy and require considerable persistence. At present, the state's Office of Recovery Services has 15,000 non-AFDC cases and 35,000 AFDC cases (Abbott 1987).

New child support guidelines to be implemented in October, 1988 seemed to promise some relief. Although child support payments are expected to increase by approximately 15 percent over current levels, Utah's guidelines will place the payments in the bottom six of 42 states having guidelines, and are not retroactive (Sisco 1988).

4) Economic dependency arising from the traditional model of marriage itself is a complex situation deeply rooted in our culture. This will change only as societal perceptions about marriage and the "proper" roles for men and women change. The ultimate irony is that given the low earnings most divorced women can command in the labor market, remarriage (not career advancement or human capital investments) is the most reliable route to restored economic security (Burkhauser & Duncan, in press). This situation raises questions about a legal system which assumes economic parity between the sexes when in reality many women's economic security is highly dependent upon men.

This study provides information related to the division of marital property and immediate post-divorce incomes. Like any cross-sectional study it gives us a picture of a point in time, a time that is not representative of the long-term economic well being of the individuals involved. However, preliminary data suggest the majority of women who remain single after divorce will spend their years in acute economic hardship (Duncan & Hoffman 1985). Presently, 43.6 percent of Utah's divorced women live in poverty compared to 37.5 percent nationally (Goodman & Heaton 1986).

Remarriage and Economic Well Being

For most of the women in this study the only way to regain their previous level of living is to remarry (Burkhauser & Duncan, in press; Day & Bahr 1986). However, due to their age and the limited pool of potential mates in rural communities, these prospects are slim. Their ages and number of dependents put them in the category of divorced persons who are unlikely to remarry.

Using census data, Glick (1984) found that the rate and timing of remarriage varies considerably by gender, race and education. Men remarry at significantly higher rates--five-sixths of all divorced men remarry compared to three-quarters of all divorced women (Norton & Glick 1976; Spanier & Glick 1980). The median length of time between divorce and remarriage is about three years, with one-third of all remarriages occurring within two years of divorce (Spanier & Glick 1980).

The higher a man's income the more likely that he will remarry--the reverse is true for divorced women (Glick 1980). The probability of remarriage for women also varies with education. Divorced women with no college education tend to remarry quickly, while those with more education either wait longer to remarry or remain unmarried (Glick 1984). Women with a high school education or less remarry most rapidly, due at least in part to their low earning power (Glick 1980). Of the 13 women in this study who remarried, six were high school graduates, six had "some college" and one had some other post-high school training. Six of the women who were still divorced were college graduates, eight had a graduate degree. Six of the eight men who had remarried were high school graduates, the other two had some college or trade school.

According to data from the Current Population Survey of the U.S. Bureau of the Census, women's ages also affect their remarriage rates. "The woman least likely to remarry is one who was married more than 10 years before divorcing, who was over 40 years old when she divorced, and who married somewhat later than average" (Spanier & Glick 1980, p. 297). The mean age of the divorced wives in this sample was 38.7 years at the time of the interview. Children also seem to be somewhat of a deterrent to remarriage (Spanier & Furstenberg 1987). Thus the prospects for remarriage for most of the women in this study appear to be low.

Conclusion

Other researchers (Hoffman & Holmes 1976; Weitzman 1985) have developed measures which show a pattern of substantial increases in post-divorce income for men and substantial decreases in post-divorce income for women. But is it "worse" in rural Utah than in other places? With qualifications, the answer has to be "yes." Wages for men and women are lower in Utah than other states in the Mountain Region, and in the nation. This limits the pool of assets courts have to divide and the amount of money available for child support and alimony. Because of Utah's higher birth rate and larger families, custodial mothers are responsible for more children than women elsewhere. This is not to say that legal rules are not important but to point out that courts are constrained by the life circumstances of the couples who come before them.

Utah's bar and bench need to be especially sensitive to the economic needs of divorcing women. What is "just and equitable" for them may be something other than an "equal" distribution of tangible assets and limited amounts of alimony and child support.

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A RESPONSE TO
THE ECONOMICS OF DIVORCE AND REMARRIAGE FOR RURAL FAMILIES

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Rowe and Lown join others in making the case for divorce settlements which provide "justice and equity" in distribution of tangible assets, as well as in awards of child and spousal support. They support the goal of equalizing the level of living in the two new households.

Their data indicate that in rural Utah, as it is in other states, gender typing in asset distribution is a recurring problem. The wife and children frequently receive the home and furnishings, which are usually the couple's major asset and a dubious asset, to be sure. In these settlements, the husband is usually awarded the real property, retirement accounts, business and professional assets, which have income-producing potential.

Some questions to be answered: Since the usual connotation of "rural population" is of an agarian economy, would not real property (very probably land) rather than the home frequently be the couple's major asset? Or is this rural Utah population different from the stereoptypic rural agrarian population? Moir (1988) notes that land may well be a major factor in the economic survival and well being of the rural binuclear family. The potential for micro impact of property distribution at divorce suggests a corollary macro impact on an agricultural economy.

Rowe and Lown noted that the award of the home with no provision for maintenance or mortgage payments often leads to loss of the home, which further complicates the economic dilemma of the custodial parent, usually the wife. McLindon (1987) suggests a solution to this recurring problem through an arrangement for the custodial parent be given rent free occupancy of the home until the children are grown. The noncustodial parent retains an interest in the home payable upon sale of the home following termination of support of the last child. This type of settlement would be a major step toward "equity" for both parties.

An example of how a state can make advances toward such "equitable" settlements can be seen in the formation by the California State Senate of a Task Force on Family Equity. This group included Senators, family law researchers, judges, private attorneys, district attorneys and advocates for both men and women's rights. The Task Force on Family Equity Report was sent to the California Legislature in November, 1987. As a result, several bills were submitted to the Legislature during the 1988 session. One of several bills chaptered in 1988 was Senate Bill 1341 regarding the "deferred sale of home order". This Bill required consideration of a child's school and community relations, physical and emotional needs, the custodial parent's employment, financial ability of both parents, as well as the tax consequences of sale and the economic detriment of deferred sale.

The California Senate Task Force, with Rowe and Lown, considered the increasing "feminization of poverty" (a more accurate term would be "impoverishment of women and children"). Both state a goal for divorce settlements as: the equalization of the postdivorce economic well being of all parties. In both instances, comparisons of pre and postdivorce incomes formed the basis for discussion.

Rowe and Lown note that sample size and population limit the generalizability of their findings (1987 interviews, n=131, rural Utah). It should be noted that there has been frequent generalization from Weitzman (1981) findings with a smaller sample from another aberrant population (1977-78 interviews, n=114 men/114 women, Los Angeles County, California). Her findings on the comparison of pre and postdivorce standard of living[1] as +42% for men and -73% for women has been widely cited in professional journals, legal and legislative materials, as well as in the popular press. In fact, Weitzman has parlayed these and other findings into professional notoriety, launched a divorce revolution, and published widely including the Divorce Revolution.

In further support of Rowe and Lown's findings, note other pre and postdivorce income studies sample sizes and populations: McGraw, et.al.(1981-82), 1978 dissolutions, n=91, Cuyahoga County, Ohio; McLindon (1987) 1980 n=63, New Haven County, Connecticut; Wishik (1986) 1983 n=25, two rural and two urban counties, Vermont.

Rowe and Lown note "premarital standard of living" as a factor in Utah spousal support determination. The California Senate Family Equity Task Force also addressed this and other equity issues in two bills passed by the California Legislature and signed by the Governor during 1988. Senate Bill 1296 requires the courts to begin determination of spousal support based on the marital standard of living, with the goal to "equalize economic well being in the two postdivorce households." Senate Bill 1614 requires all spousal support orders include provisions for automatic wage assignment to go into effect upon one-month delinquency in support payments.

Rowe and Lown have added validity to the work of other researchers and provided further evidence of inequities in divorce settlements. They note the traditional cultural and family values which predominate in Utah. They should be urged to recognize the impact their findings could have on the Utah Bar and bench, as well as the legislature and population in general. Dissemination of their findings in the public media, as well as in professional circles should be a first priority.

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[1] This is really "level of living" since the comparison is of income in relation to needs with needs based on USDA low standard budget.

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ECONOMIC WELL-BEING AND ADAPTATION TO STRESS OF ONE-EARNER AND TWO-EARNER RURAL NEVADA FAMILIES

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Abstract

The purpose of this study was to assess the economic well-being and adaptation to stress of one-earner and two-earner rural Nevadan family households. Stress levels, satisfaction with family life, and satisfaction with family finances were compared as indicators of adaptation to stressors of the two lifestyles.

Introduction

During the last one hundred years we have seen enormous changes in the economic structure of American society. There has been a shift from an industrial society to an information society with several related trends within the United States that directly affect the family unit including increased participation of women in the labor force, increased recognition of the impact of employment on family life, an increased number of single parent families and change in fertility rates (Naisbett & Arburdene 1985; Englebrecht and Neis 1987). These trends reflect the impact that the shift toward an information society has had on family structure, demographic characteristics and employment participation within the United States.

The increase in the demand for female employees is directly related to shifts in the economy (Ross, Mirowsky & Huber 1984). In the last decade, over 13 million women have joined or rejoined the work force; currently over half of all women age 16 and older are employed (Taeuber & Valdisera 1986). Most women who have their own careers have not relinquished their responsibilities at home, but rather have added a second role to their family role (Yogev 1981). These women have been found to experience increased pressure and role strain as they attempt to manage two major roles (Taeuber & Valdisera 1986).

Dual-career families have always existed (Rapoport & Rapoport 1971). Recently, however, there has been a significant increase in the number of dual-career families and an increase in their level of commitment to the dual-earner lifestyle as a way of life. This means that both partners within the family unit have major career goals outside their family role responsibilities (Hester & Dickerson 1981). Men and women experience increased conflict in their role responsibilities and increased demands on time, energy and other personal resources in response to changes in their work and family roles (Harmelink 1986). Because of increased conflict in role management and increased demands on resources, there has also been an increase in stress and tension in the family unit which must be dealt with on a daily basis (Walker 1985). It is not surprising therefore, that stress has become a popular topic of research.

Stress has been traditionally viewed in the literature as a negative, destructive force (McCubbin, Cauble & Patterson 1982). Researchers however, have observed that some families adapt and effectively manage stress by utilizing resources available to their specific family unit. Current research is attempting to determine why some families are successful in stress management while others collapse under the pressure of stressor events (Halahan & Moos 1986). Few studies have examined the adaptation of families to the stressors of the emerging dual-earner lifestyle. Dual-earner families have economic resources that may outweigh the costs in time, energy, and tension that are expended in managing multiple roles (Yogev & Brett 1985).

Aggregate income data for the United States confirms that two-earner families have higher median incomes than one-earner families (U.S. Census Bureau 1986). Foster did a study of 5,000 one-earner and two-earner families from 235 areas within the United States and found that two-earner families have higher median incomes, higher net worth, higher levels of consumption, higher levels of debt, and lower levels of savings than one-earner families.

Dual-earner families have a pile-up of stressors related to multiple roles and role conflicts. They also have greater economic resources than one-earner families with which to meet these demands (Foster 1980). These economic resources may be especially important in determining family well-being in rural Nevadan communities which tend to have unique characteristics and boom-bust economies.

Theoretical Framework

Two theories were used to guide this research: Family Resource Management Theory and McCubbin's Double ABCX Theory of Family Stress and Adaptation. Family Resource Management Theory views the family unit as a system that processes inputs (demands and resources) so that resources are used to meet demands. The system's approach analyzes the transformation of input into output using managerial processes (Gross, Crandall & Knoll 1980). Outputs from the family system into the environment are met demands, used resources, and resulting satisfaction or lack of satisfaction (Broderick & Smith 1979).

The Double ABCX model of family stress and adaptation (Patterson & McCubbin 1984) builds on the ABCX model of family stress and crisis developed by Hill in 1949. The Double ABCX model of family stress and adaptation states that the pile-up of demands on a family unit (AA), combine with available family resources (BB), and the family's perception or general orientation of the problem (CC), to produce family adaptation (XX).

The adaptive resources of the family refer to both the existing resources and the resources that are developed or strengthened by the stressor event. The use of resources is the mediating factor between stress pile-up and adaptation.

Family Resource Management theory would state that the family uses resources to meet a pile-up of demands and the outcome is the level of adaptation to the pile-up of demands (Burr, ed. al. 1979). Resources, according to the Double ABCX model, include personal resources (personal characteristics of family members), family resources (cohesiveness and adaptability of the family unit), and social resources (people or institutions outside the family unit). Management theory would include economic as well as noneconomic resources in the model. Families may use money income, savings, or credit to meet some of their demands therefore reducing the pile-up of stressor events. Family Resource Management theory would consider economic trade-offs that are made by individual family units as an adaptation to pile-up of stressors.

The Double ABCX model of Family Stress and Adaptation has several propositions. For the purposes of this paper, the following proposition will be used to predict level of family stress:

> "The amount of personal resources, family resources, and social support resources influences the severity of the strain created by the pile-up of demands, this is a negative relationship (McCubbin, Cauble & Patterson 1982)."

Economic resources were added to the model in accordance with Family Resource Management Theory.

Dual-earner families have a pile-up of stressors related to multiple roles and role conflicts. They also have greater economic resources than one-earner families with which to meet these demands (Foster 1981). These economic resources may be especially important in determining family well-being in rural Nevada communities which tend to have unique characteristics, such as boom-bust economies (Weigel, Weigel & Blundall 1987).

Purpose of the Study

The purpose of this study is to assess the economic well-being and adaptation to stress of one-earner and two-earner rural Nevadan family households. Five objectives were used to direct this study.

Objective 1: To compare demographic characteristics and financial profiles of one-earner and two-earner rural Nevada family households.

Objective 2: To test McCubbin's proposition that "the amount of personal resources, family resources, and social support resources influences the severity of the strain created by pile-up of demands, this is a negative relationship" (McCubbin, Cauble & Patterson 1984).

Objective 3: To assess whether or not economic resources contribute to reducing the severity of strain created by pile-up demands, and therefore should be added to McCubbin's model.

Objective 4: To assess the differences between one-earner and two-earner family households in their use of economic and non-economic resources. to meet the demands of their lifestyles.

Objective 5: To measure differences in levels of stress and satisfaction of one-earner and two-earner family households as measures of adaptation to stressors of the two lifestyles.

Methodology

This study was derived from the Nevada portion of the Agricultural Experiment Station Regional Research Project, W-167, "Coping with stress: Adaptation on non-metropolitan families to socioeconomic change." The data used for this study was collected during the summer months of 1987. The sample of 432 respondents were selected from eleven rural Nevada communities with populations between 2,500-10,000 residents, using telephone directories and a stratified random sampling procedure.

The Dillman method for mailed questionnaires was used to collect the data (Dillman 1978). A fifteen page questionnaire with Likert-type questions was used to assess the differences among one-earner and two-earner rural Nevada family households in the areas of financial well-being, adaptation to stress, and level of satisfaction.

Economic resources of each respondent were determined by measuring total household income, savings, non-mortgage debt, and net worth. Total household income was measured in increments of $10,000 while total savings and total non-mortgage debt were measured in weighted increments ranging from "one month" to "two years or more of income." Respondents were asked to estimate their net worth by calculating the value of all their assets and liabilities and then subtracting liabilities from assets.

Non-economic resources included social support variables such as "receiving help from others," "interaction with friends and relatives," "talking to a friend or relative about a problem," and "frequency of church attendance." "Receiving help from others" asked respondents to indicate the types of help they had received from others in the past month. There were a total of twenty items asking respondents about the type of help they had received. A total score was used in the analyses. The other five variables each included one item measured on a Likert-type scale: interaction with friend and relatives (once a month to daily), talking to friends and relatives about a problem (never to fairly often), and church attendance (never to twice a week or more).

Stress and satisfaction were additional variables used in this study. Stress was measured using a total score on the 14 item "How You Feel" scale. Satisfaction was measured using responses from questions asking about finances (6 items), family life (3 items), and life in rural Nevada (1 item). All the satisfaction items were measured on a one to six scale: extremely dissatisfied to extremely satisfied. Total scores were used with finances and satisfaction with family life.

The questionnaire was sent to 881 rural Nevada residents. A total of 432 usable questionnaires were returned which resulted in a response rate of 49 percent. Seventy-one questionnaires were returned because they were unable to be delivered by the Post Office. Nineteen refused participation and 14 of the respondents randomly selected were deceased.

Data was collected from one-earner or two-earner families where the couples were married or living together on a permanent basis. A total of 75 one-earner families and 184 dual-earner families were used in this study. The remaining 164 respondents were either retired, divorced, widowed or single and were not included in the sample.

There were a total of 226 males and 195 females. Respondents were middle aged (mean age = 49.5 years old) and had lived in the communities for a mean of 19.2 years.

Analysis of Data

Analysis of variance, standard multiple regression, and discriminant analysis were used to analyze the data. One-way Analysis of Variance (ANOVA) was used to assess the differences between one-earner and two-earner rural Nevada families in their level of income, savings, non-mortgage debt, and net worth. Standard multiple regression was used to test McCubbin's proposition that there is a negative relationship between non-economic resources and level of stress, and to determine whether or not economic resources also moderate stress levels in the two family types. Stepwise discriminant Analysis was used to assess the major differences between the two family types in the use of economic and non-economic resources to meet demands of the one-earner and two-earner lifestyles, and to measure differences between the two family types in levels of stress and levels of satisfaction as measures of adaptation to stressors.

Findings

Financial Well-Being

Two earner respondents had somewhat higher incomes ($27,471) than one-earner respondents ($20,799). Two-earner families also had higher level of net worth ($130,912) when compared to one-earner families ($101,048). However, these differences were statistically significant using analysis of variance. There were also no differences in levels of savings and non-mortgage debt between the two groups (see Table 1). In face, the most distinctive characteristic of the two groups was their economic homogeneity which has been found to be characteristic of the rural population in Nevada by other researchers (Haldeman & Peter 1988).

TABLE 1. Financial Profile of Sample

	ONE-EARNER (n=75)	TWO-EARNER (n=184)
	%	%
TOTAL INCOME		
$19,999 or less	14.6	4.9
$20,000 to 39,999	41.3	47.3
$40,000 to 59,999	33.3	33.2
$60,000 to 79,999	4.0	8.1
$80,000 or more	4.0	3.8
Mean Total Income (converted to actual dollar value)	$20,799.17	$27,471.43
SAVINGS (compared to income)		
One month or less	29.4	18.0
Two to five months	17.3	27.2
Six months and over	46.7	44.0
No savings	5.3	3.8
Mean Savings (converted to actual dollar value)	$1,633.44	$1,582.46
NON-MORTGAGE DEBTS (compared to income)		
One month or less	42.7	28.8
Two to five months	28.0	27.8
Six months and over	20.1	25.5
No debts	6.7	12.0
Mean Debts (converted to actual dollar value)	$1,447.40	$1,867.28
NET WORTH		
Less than $9,999	6.5	2.6
$10,000 to 29,999	13.3	11.7
$30,000 to 59,999	26.6	10.3
$60,000 to 79,999	10.7	9.1
$80,000 to 99,999	5.3	5.8
$100,000 and over	21.1	26.9
Missing	17.3	32.1
Mean Net Worth (converted to actual dollar value)	$101,048.39	$130,912.

Adaptation to Stress

Standard multiple regression was used to evaluate stress as the dependent variable and economic and non-economic resources (receiving help from others, talking over problems with friends and relatives, visiting with friends and relatives, and church attendance) as the independent variables. Standard multiple regression has several assumptions which must be met for the analysis to be reliable. Normality, linearity, and skewness of the data were evaluated using scatter plots of the residuals. No outliers or violations of the assumptions were found.

The correlation (R) for regression was not significantly different from zero at the .05

alpha level for either the economic or non-economic variables. It would have been significant for the non-economic variables in one-earner households if the alpha level were set at the .10 level over the .05 level, when standard multiple regression is used for explanation rather than prediction. These results were interpreted and are reported in Table 2 and in the narrative which follows.

Only one of the independent variables, visiting with friends/relatives, contributed a significant amount of unique variance in predicting stress in respondents from one-earner families. Shared variance for all four variables (receiving help from others, talking to friends or relatives about a problem, visiting with friends or relatives, and church attendance) was .009. Altogether, 11 percent of the variability in stress levels of respondents from one-earner family households could be predicted by knowing scores on the four independent variables. These findings lend partial support to McCubbin's theory that non-economic resources moderate levels of stress. However, this relationship was positive rather than negative as predicted by McCubbin, for three of the four variables. The theory also only held true for one-earner families. There was no support for including economic resources in McCubbin's model.

Differences in Use of Resources

Stepwise discriminant analysis was used to determine differences between one-earner and two-earner families in use of non-economic and economic resources (see Table 3). Underlying assumptions for discriminant analysis were examined, and no violations were found. The assumption of normality was evaluated by examining a scatterplot or outliers and skewness. Homogeneity of the variance/covariance matrices was evaluated by Box's M=12.15, p=7.7, and no violation of the assumption was found. Data analysis produced no output that would suggest nonlinear relationships among the variables. Mahalonobis distance was used to direct the stepping procedure. One discriminant function was calculated with a combined Chi-square with three degrees of freedom of 11.641, p=.009 (Table 3). The primary variable distinguishing between respondents from one-earner and two-earner families was total income. The mean score for total income for one-earner respondents was $20,799.17 and for two-earner respondents was $27,471.43.

The second variable to enter the equation was "receiving help from others." Total non-mortgage debt entered third. All other variables (savings, net worth, talking to friends/relatives, and church attendance) did not enter the equation. These results indicate that one-earner and two-earner families differ most in their levels of income in combination with the help they received from others and their levels of non-mortgage debt. Two-earner families have higher levels of income, non-mortgage debt, and received more help from others, than one-earner families. The two groups have significantly different levels of both non-economic and economic resources.

Although it was found that the amount of "help received from others" was not significantly related to level of stress, the two groups did differ in the amount of help they received from others. Two-earner respondents received significantly more help than one-earner respondents for almost all (16) of the twenty categories. The only types of help that was received more by one-earner families than in two-earner families were transportation, child care, toys for the children, and receiving books, magazines, or newspaper.

Two-earner respondents had higher levels of non-mortgage debt than one-earner respondents. The mean dollar value of non-mortgage debts was $1,447.40 for one-earner families and $1,867.28 for two-earner families. While this difference was not significant using univariate analysis,

TABLE 2. Standard Multiple Regression of Non Economic Resources on Stress Level of Respondents from One-Earner Families (n=75)

VARIABLES	STRESS (D.V.)	HELPING	TALKING	VISITS	FREQUENCY OF RELIGION	B	b	sr^2 (unique variance)
HELPING	.05					.031	.289	.002
TALKING	.01	.01				- .029	-.008	.000
VISITS	-.29	.32	.04			-1.022*	-.289	.024
CHURCH ATTENDANCE	.16	.18	.22	.00		1.133	.155	.075
INTERCEPT						40.577[a]		
MEANS	35.75	4.84	3.93	6.25	1.35			
STANDARD DEVIATION	9.65	4.77	2.76	2.73	1.32			
R = .11								
R = .33**								

* P = .02
**P = .095

[a] = Unique Variability = .101; Shared Variability = .009

TABLE 3. Results of Stepwise Discriminant Analysis of Economic and Non-economic Resources as Predictors of One-earner and Two-earner Family Types (n=259)

PREDICTOR VARIABLES (PV)	STANDARDIZED CORRELATION COEFFICIENT (PV with discriminant function)	UNIVARIATE F (3,181)	PV SCORES	
			ONE-EARNER	TWO-EARNER
TOTAL INCOME	.759	6.584	$20,799.17[a]	$27,471.43[a]
HELP RECEIVED OTHERS	.496	2.767	4.48	5.56
DEBT	.445	2.238	$ 1,447.40[a]	$ 1,867.28[a]

Canonical R = .249
Eigenvalue = .066
Group Centroids: one-earner = -.361; two-earner = .182

P = .0087 (for the discriminant function)

[a] Mean scores have been converted to actual dollar values for ease in interpretation

level of debt in combination with level of income and the amount of help received from others was significant in explaining variance using multivariate analyses.

Adaptation to Stressors

Stepwise discriminant analyses were also used to assess the differences in levels of stress and satisfaction between one-earner and two-earner rural Nevada families (See Table 4). The stepping procedure was directed using Mahalonobis distance. One discriminant function was calculated with a combined Chi-square with two degrees of freedom on 11.179, p=.0037. The first variable which distinguished one-earner and two-earner families in adaptation to stress was satisfaction with finances. The score for satisfaction with finances was lower for one-earner than for two-earner families.

TABLE 4. Results of Stepwise Discriminant Analysis of Measures of Adaptation to Stress as Predictors of One-earner and Two-earner Family Types (n=259)

PREDICTOR VARIABLES (PV)	STANDARDIZED CORRELATION COEFFICIENT (PV with discriminant function)	UNIVARIATE F (2,228)	PV SCORES	
			ONE-EARNER	TWO-EARNER
SATISFACTION WITH FINANCES	1.008	10.652	21.00	23.52
SATISFACTION WITH FAMILY	-.549	3.057	14.58	12.60

Canonical R = .219
Eigenvalue = .050
Group Centroids: one-earner = -.332
two-earner = .150
P = .004 (for the discriminant function)

The second variable to enter the equation was satisfaction with family life. The remaining variables, stress and satisfaction with rural life in Nevada, did not enter the equation. See Table 5 for summary of mean scores for stress and satisfaction levels. These results indicate that one-earner and two-earner family households differ most in their satisfaction with finances and family life. Two-earner families were most satisfied with finances, while one-earner families were most satisfied with family life.

TABLE 5. Stress and Satisfaction Levels in One-earner and Two-earner Rural Nevadan Family Households (n=259).

	ONE-EARNER (N=75)	TWO-EARNER (N=184)
Stress		
Mean	35.75	34.99
Range	0-64	0-58
S.D.	9.65	8.12
Satisfaction with family life		
Mean	14.00	12.60
Range	0-18	0-18
S.D.	4.09	5.35
Satisfaction with finances		
Mean	21.00	23.52
Range	6-36	6-36
S.D.	6.64	5.92
Satisfaction with rural Nevada		
Mean	4.81	4.90
Range	1-6	1-6
S.D.	1.23	1.78

Discussion

McCubbin's proposition which was tested, was only minimally supported. For one-earner families, all four of the non-economic variables were related to stress levels as McCubbin had predicted. However, this finding did not hold for two-earner families. Another deviation from McCubbin's proposition was the finding that the relationship was positive, rather than negative, for three of the variables. In other words, the more stress the respondents felt, the more likely they were to receive help from others, talk to their friends/relatives about the problems, and the more frequently they attended church.

"Visiting with friends/relatives" was significantly and negatively related to stress, unlike the other variables, which means that the higher level of stress was associated with fewer visits with others in the support network. It seems logical that social support such as "receiving help from others" would alleviate stress, but on the other hand, it may be that help is given in response to a pile-up of stressors or specific crises. As stress level increases, help increases, and if the respondent is coping well, less help will be needed.

None of the economic resources were significantly related to stress level of the respondents in either of the two family types. It can be concluded therefore, that McCubbin's proposition was only marginally supported in this study and the hypothesis that economic resources are related to levels of stress was not supported at all. The fact that there were no univariate significant differences among the respondents in income, savings, non-mortgage debt, and net worth helps to explain why economic resources might not have influenced their levels of stress.

This study provided evidence that it is important that multivariate analyses be used to study the complex nature of stress. It would appear that some non-economic resources are used more in response to stressors and to alleviate stress, while others, like visiting with friends and relatives, provide a sense of support which prevents an accumulation of stress. Future research is needed to examine how non-economic resources function to prevent and/or alleviate stress.

One-earner respondents received types of help that have low monetary cost, for example transportation, toys for the children, help with child care, and receiving books, magazines or newspapers (See Table 6). One possible explanation as to why one-earner respondents received more help in these areas may be that one-earner families network with other one-earner families who have fewer economic resources available and therefore share or exchange goods and services. Two-earner respondents on the other hand had more disposable income and would be able to reciprocate the more expensive types of help they received, such as going out to eat and attending recreational activities. Differences in type of help received may be a reflection of the availability and use of discretionary income among one-earner and two-earner families.

TABLE 6. Receiving Help from Others (n=259)

	ONE-EARNER (n=75)		TWO-EARNER (n=184)	
	(N)	%	(N)	%
TAKEN TO DINNER				
In the past month	(41)	54.6	(118)	64.1*
TAKEN TO RECREATION				
In the past month	(25)	33.3	(83)	45.1*
GIVEN ADULT CLOTHING				
In the past month	(18)	24.0	(47)	25.5*
GIVEN CHILDREN'S CLOTHING				
In the past month	(14)	18.6	(38)	20.6*
GIVEN HOUSEHOLD APPLIANCE/TOOL				
In the past month	(13)	17.3	(39)	21.2*
GIVEN GROCERIES				
In the past month	(9)	12.0	(26)	14.1*
GIVEN NON-FOOD HOUSEHOLD SUPPLIES				
In the past month	(8)	10.7	(28)	15.2*
GIVEN CASH/CHECK				
In the past month	(5)	6.6	(19)	10.3*
GIVEN BOOKS, MAGAZINES, NEWSPAPERS				
In the past month	(28)	37.4*	(59)	32.0
GIVEN TOYS				
In the past month	(7)	9.3*	(15)	8.2
GIVEN FURNITURE				
In the past month	(4)	5.3	(16)	8.7*
GIVEN CHILD CARE				
In the past month	(19)	25.3*	(40)	21.7
GIVEN TRANSPORTATION				
In the past month	(28)	37.4*	(56)	30.5
GIVEN HOUSEWORK/REPAIRS				
In the past month	(13)	17.4	(46)	25.0*
GIVEN HOME PREPARED FOOD				
In the past month	(14)	18.7	(46)	25.0*
LOANED HOUSEHOLD APPLIANCE/TOOL				
In the past month	(14)	18.7	(41)	22.3*
LOANED MONEY				
In the past month	(4)	5.3	(13)	7.1*
LOANED BOOKS, MAGAZINES, NEWSPAPERS				
In the past month	(19)	25.4	(49)	26.6*
LOANED FURNITURE				
In the past month	(1)	1.3	(4)	2.2*
LOANED CAR/TRUCK				
In the past month	(11)	14.6	(28)	15.2*

*Indicates the group that received the most help in the last month.

One finding that is difficult to explain is that two-earner respondents (10.3%) received more gifts of cash or checks than the one-earner respondents (6.6%). It seems logical that the reverse would be true; one-earner families with fewer economic resources would get more help in the form of cash or checks. A possible explanation for this may be that the two-earner households are experiencing financial difficulties and the second income reflects need rather than choice.

Two-earner respondents were more satisfied with their finances than one-earner respondents. This seems logical because two-earner family households would have more income available as a resource for meeting these needs. However, differences in income between the two groups was not great. Some of the higher levels of satisfaction in the two-earner group may be comparative. In other words, compared to finances in the past, if the family had one earner, the family is more satisfied now that they have two sources of income.

One-earner respondents were more satisfied with their families than two-earner respondents. One-earner family households may have had more time to spend with their families resulting in higher satisfaction levels. They may also have traditional orientation towards work and family roles, with more focus on commitment to the family rather than to paid work for the homemaker. Ross, Mirowsky, and Huber (1984) found that traditional family types had higher levels of satisfaction with family life and lower levels of marital depression than dual-work or dual-earner families. They attributed this finding to the fact that attitudes toward work and family roles and behavior were congruent in the traditional, one-earner family lifestyle. It was found in this study that the respondents from both groups were highly religious. Religiosity may influence the preference for a one-earner lifestyle and traditional family roles.

One-earner respondents had only slightly higher stress scores than two-earner respondents. One-earner families have fewer (limited) economic resources to meet the demands that are placed on their family unit, but they also have more non-economic resources (e.g. time, energy) than two-earner families. It may be that families, whether one-earner or two-earner, use the resources they have, substitute when necessary, and adjust to whatever lifestyle they choose, at least in rural Nevada.

Recommendations/Implications

One-earner and two-earner families differ in their levels of non-economic and economic resources, but both types of families have adapted almost equally to the stressors of their lifestyles in terms of their levels of stress and satisfaction with their rural way of life. While there was little support for including economic variables in McCubbin's proposition using a homogeneous rural Nevada sample, other studies need to be conducted to determine whether or not economic resources act as a buffer for adaptation to stress.

A suggestion for future research would be to compare this rural Nevadan sample with rural samples from other states. This would help to establish whether or not the results of this study are unique to Nevada, or whether they can be applied to other rural communities within the United States. The question remains as to whether the results would be different for the urban population in Nevada and other states.

Results from this study contributed to the objectives of the regional project by examining economic and non-economic resources available to families in rural areas of Nevada that are experiencing socio-economic change. In particular, this study focused on differences in one-earner and two-earner family households. The findings of this study provide support for the need for continued statewide and regional research. Results can be used to guide the decision-making of policy makers, agencies, and professionals who provide public support and services to rural populations. All states are currently struggling with economic development and social issues. Nevada's rural population has unique needs and challenges related to boom-bust cycles in the local economies on top of the changes that are taking place in the socio-economic climate of the United States as a whole.

At the national level, indications of the uniqueness of the Nevada population compared to the other states in the region and the United States as a whole, should help legislators and public policy analysts to recognize the need for programs and policies tailored to meet the diversity of local and regional populations.

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SUBJECTIVE LIFE QUALITY IN DAIRY FARM HOUSEHOLDS

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ABSTRACT

The purposes of the study were to explain the life quality of husbands and wives, then simulate adjustments needed to maintain life quality if the family left farming. The random sample was 116 couples. Analysis included frequencies and multiple regressions. The husband's major predictor of life quality was satisfaction with farm work; the wives' was satisfaction with family life.

High interest rates, declining asset values, reduced government price support levels, and low farm product prices have combined to make the mid to late 1980s difficult times for farm families. Dairy farms, because they are highly capital intensive, are among the types of farms that have suffered. Cow numbers and milk production had expanded rapidly between 1979 and 1983. Then the trend of appreciating farm land and building values reversed and dairy price support levels dropped.

Economic conditions have made dairy farms vulnerable to financial difficulties. Several studies have described the farm financial situation in objective terms, but how has the financial situation impacted farm families? Does the dairy farm financial situation have a large influence on life quality, or are family and social factors the major influences on perceived life quality? How will the life quality of families involuntarily leaving farming be affected?

Considering the close interaction between the household and the farm—they usually share a geographic location, most household members work on the farm, and the majority of the family income may come from the farm—one might anticipate that what affects the farm affects the family. Since many farms are passed on from generation to generation, any decision or legal action to liquidate a farm may also have multi-generational effects. More limited financial uncertainties, adjustments, and potential crises may also influence the life quality of farm families on a more short term basis.

Life quality and factors which contribute to it, may be measured on either an objective or subjective basis. Objective measures—such as family income and acres farmed—are useful indicators, but they do not measure life quality as the person perceives it. Subjective measures, such as satisfaction with income and with financial security tell us more about the current life experience of the respondent. The standards a person applies to the situation, as well as the situation itself, influence the subjective assessment. Subjective measures may foretell expected problems or concerns before they actually occur and can be objectively measured. Therefore, subjective measures could serve as early warning signals.

The purpose of the study was to measure and explain the life quality of husbands and wives on dairy farms, then simulate potential areas for change if the couple left farming.

Literature Review

Two sets of subjective life quality studies are considered here. First, those studies dealing with the total adult population are reviewed; and second, those dealing with rural and farm populations.

Two major studies conducted by the Survey Research Center of the University of Michigan focused on perceptions of life quality (Campbell, et al. 1976; Andrews & Withey 1974, 1976). A central theme of both studies was the interplay between the satisfactions people derive from different aspects of their lives and how these aspects combine to form their overall evaluations of perceived life quality.

Both studies found that a person's overall life satisfaction was based largely on the satisfactions that flowed from a variety of different domains. Andrews and Withey reported that the four domains which contributed most to perceived overall life quality were satisfaction with yourself, your family life, the amount of fun in your life, and a money index developed from satisfactions with family income and level of consumption. The remaining eight domains Andrews and Withey identified were your health, your job, goods and services, your house or apartment, things you do with your family, time to do things, spare time activities, and an index of satisfaction with national government (1974, 1976).

Andrews and Withey (1974, 1976) observed that the twelve domains did as well in explaining satisfaction with overall life quality as did a much larger list. They indicated that information concerning income, sex, race, age, family life cycle stage, and education added nothing more to understanding why some people were content with their lives and others were not.

Nyblad (1975) found that social factors contributed most to overall life quality, economic factors are second, and environmental factors last. Both Campbell, et al., and Andrews and Withey stated that people reserved their ratings of greatest satisfaction for those parts of their lives that were the most personal and intimate. The more removed a domain was from the person, the more dissatisfied they were likely to be with that domain. In the Campbell, et al. study, respondents were most satisfied with their marriage, second most satisfied with their family life, and least satisfied with savings and investments (1976).

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Campbell, et al. stated that the importance of income as a resource came through at many points in their study. Because of the influence of one's financial situation on feelings of life quality and because of greater expressed dissatisfaction with the financial domain, more detailed studies were initiated. Strumpel found a strong relationship between satisfaction with income, reports of past increases in income, and a sense of well-being. The relationship was constant, even after the effects of income level were taken into account (Strumpel 1975).

Strumpel (1975) noted that satisfaction stands for acceptance rather than approval. Some people accept undesirable situations more easily than others. The standard some people use to judge satisfaction may employ a barely acceptable minimum of "tolerability," while others use a "fair," "good," or even an "ideal" state of affairs as the standard. He felt that the use of different standards was not randomly distributed over persons or domains (p. 79). Strumpel believed that if an individual's standards for evaluating his condition were tainted by the perception of its persistence, satisfaction scores by domain would appear in a new perspective. Marriage was likely to be considered rather permanent; one's job, or at least the kind of job one can hope to occupy, was somewhat fixed. In contrast, people's income and level of consumption changed; variations in income, prices, and material needs occurred constantly and were often difficult to anticipate (Strumpel 1975).

Another body of research on subjective life quality focused on rural and farm populations. Marans and Dillman (1980) conducted a secondary analysis of three national surveys and one Michigan survey done between 1971 and 1975, after dividing the samples into five population density groups. The groups ranged from large and small urban area groups through small towns to large and small rural area groups. They compared perceived life quality and life domain satisfaction across the groups. Their major findings included (1) people in small rural areas tended to express higher levels of life satisfaction than those in large urban areas, (2) rural residents were among the most satisfied with free time activities, (3) farmers, compared to all other workers, were the most likely to express higher levels of overall job satisfaction, (4) residents of rural areas and small towns were as likely as people in urban areas to give positive evaluations of their marriages and children, and (5) compared to urban area residents, rural Americans tended to be older, predominantly white, of lower income and educational level, and more likely to be unemployed.

Molnar studied the relationship of objective and subjective characteristics of the individual and the farm business to the farm operator's subjective well-being. He concluded that one major standard underlying assessment of well-being seemed to be the family's overall financial level of living (Molnar 1985).

Regarding job satisfaction, Campbell (1981) observed that farming was unlike any other occupation. Farmers rated their work very high in terms of challenge, or the opportunity to exercise personal skills, and in pleasant working conditions. However, they saw their work as well below average in sociability and their evaluation of its financial reward is the most negative of all occupational groups. The Quality of Life Project (1971) compared men's satisfaction with their jobs by occupational groups. Mean satisfaction scores on a 7-point scale ranging from 7=completely satisfied to 1=completely dissatisfied were, in descending order, farmers, farm managers and laborers, 6.04; proprietors, business men, and self-employed, 5.92; managers and officials, not self-employed, 5.92; craftsmen and foremen, 5.77; professionals and technical workers, 5.62; clerical and sales, 5.38; operatives, 5.16; and laborers and service workers,5.16.

Methods

Sample

The population studied was dairy farm households in the five Utah counties which ranked highest in milk production. The sample was randomly drawn from producer lists furnished by milk processing plants and the Utah Department of Agriculture, after stratification by county and by herd size. Large herd size dairy farms were over sampled and the county with the most dairy farms was under sampled. Weights were applied in the analyses to make the sample representative of the five-county dairy farm household population.

Sample members were contacted by an introductory letter, followed by a telephone call to determine eligibility and schedule an interview. Eligible households were those operating a dairy farm with twenty or more milking cattle in 1985, with both husband and wife present, and, if more than one family was involved in the dairy farm operation, the family most knowledgeable of the dairy farm financial records was to be interviewed. Two-person interview teams conducted separate, simultaneous interviews with the husband and wife in 1986. A total of 116 couples were interviewed. The response rate was 72 percent.

Variables

The seventeen measures of life quality were those developed and tested by Andrews and Withey (1976). They include the recommended two-measure index of overall life quality and twelve recommended single question measures of life domains which had been found to have maximum explanatory power (p. 346). The job satisfacfaction measure was slightly reworded to specify off-farm work and the three questions on farm work satisfaction were developed by modifying other Andrews and Withey job satisfaction measures. Their 7-point delighted-terrible scale was also used.

The dependent variable, life as a whole, summed responses to a question asked near the beginning and repeated at the end of a larger set of life quality questions, then divided that sum by two. The question was, "How do you feel about your life as a whole?" (Andrews & Withey 1976, p. 66). The wives' life quality index mean score was 5.59, slightly above midway between "mostly satisfied" and "happy;" the standard deviation was .74. The husband's life quality index mean scores was 5.74, nearer "happy" than was the wives' scores; the standard deviation, at .74, was very similar to the wives'. The correlation between the husbands' and wives' life quality scores was .91, significant at the .038 level; the paired T-value was -1.79, with a two-tailed probability of .074. Because several domain satisfaction measures differed significantly between husband-wife pairs, the first asked life as a whole measure was significantly different at the .044 level, and the life as a whole index—at .075 probability—approached a significant difference, husbands' and wives' life quality was analyzed in separate equations.

The domain satisfaction measures were individual questions, with the exception of farm work. The farm work index summed three questions, then divided the product by three for comparison with other domain measures and for ease of interpretation. The three questions were: How do you feel about..."the work you do on the farm—the work itself," "working on the farm—the physical surroundings, the hours, and the amount of work you do?", and "the people you work with—your farming partners, family members who work on the farm, and hired help?"

Analysis

Frequencies and their accompanying statistics were used to describe the sample. The main analyses involved multiple regressions of domain satisfaction measures to overall life quality, with separate equations of husbands and wives. Probabilities of .05 or less were considered statistically significant. All analyses were done with the SPSSx statistical package.

Description of the Respondents

Demographic characteristics of the respondents included their age, education, race, marital status, and number of children at home (Table 1). The mean age of husbands was 51.0, with a range of 24 to 81 years. This was close to the 50.5 average age of farm operators reported in the 1982 U.S. Census of Agriculture (Joint Economic Committee 1982). The mean age of wives was 48.7 years, with a range from 23 to 82 years old. The modal category of education was high school graduation for husbands, and vocational school or some college for wives. Since 80 percent of the persons 25 or older in the state are high school graduates, this dairy farm sample was less educated than the state average. However, the age of the dairy farm sample was also much higher than the state median age of 24, and younger people tend to have a higher level of education than did earlier generations.

TABLE 1. Description of the Sample

Description	Husband (or Family/Farm)		Wife	
	%	Mean	%	Mean
Age, in years		51.0		48.7
Education: 9-11 yrs.	13.4		6.2	
High school grad.	36.8		42.5	
Voc. or some college	31.4		43.5	
College grad, or more	18.5		7.8	
Race: White	99.5		99.1	
Marital status:				
1st marriage	91.1		96.0	
Remarried	8.9		4.0	
Length of current marriage, in years		27.9		
# of children home <19 yrs.		1.64		
Grew up on a farm	94.3		46.7	
Current farm in family 2+ generations	77.0			
Off-farm employment:				
None	61.3		62.0	
Part-time	11.6		12.4	
Full-time	27.1		15.6	
Off-farm incomes (excludes not employed)		$17,047		$6,880
Farm income, net 1985				
Loss	26.4			
Less than $10,000	36.4			
$10,000-$19,999	14.7			
$20,000 or more	22.4			
Family income, net 1984				
Less than $10,000	20.2			
$10,000-$19,999	28.5			
$20,000-29,999	20.9			
$30,000 or more	30.4			
Debt/asset ratio		.33		
Income/asset ratio		.74		
USDA Dairy Termination Program				
Bid submitted	25.2			
Bid accepted	17.3			

The sample was more than 99 percent white, which is consistent with a state population which totals 1.95 percent blacks and native Americans. More than 90 percent of husbands and wives were in their first marriage, while 8.9 percent of husbands and 4 percent of wives were remarried. The average length of the current marriage was 27.9 years. The number of children under nineteen years old living at home was 1.64. Adding two adults to the 1.64 children yields a dairy farm household size of 3.64, which is larger than the average of 3.20 persons per household in the state (Utah State University 1980). In sum, dairy farm households had lower educational levels, heads who are older in age, and larger household sizes than is typical for all people in the state.

Economic measures indicated that slightly more than 60 percent of husbands and wives were not employed off the farm. Among those who did work off the farm, husbands were more likely to hold full-time jobs. The off-farm job income of those employed averaged $17,047 for husbands and $6,880 for wives. Net farm income tended to be low in 1985; 26.4 percent had a net loss, and an additional 36.4 percent netted less than $10,000. Net family income in 1985 was obviously supplemented from off-farm sources, since only 20.2 percent had a net family income of less than $10,000, while the modal category was the 30.4 percent of dairy farm families with a family income of $30,000 or more. The mean debt/asset ratio, at .33, was higher than the .29 debt/asset ratio of all U.S. dairy farms (Financial Characteristics of U.S. Farms, January 1985), but this ratio, for an individual farm, would be considered a "safe" level of debt.

The farms of 77 percent of the families studied had been in the family for two or more generations and 94.3 percent of the husbands had grown up on farms. Additionally, 46.7 percent of the wives grew up on a farm. The possibility that the family would leave dairy farming was partially measured by participation in the Dairy Termination Program, popularly referred to as the "whole herd buyout." In this sample, 25.2 percent of the farmers submitted bids and 17.3 percent of the bids were accepted. Farmers whose bids were accepted were in the process of liquidating herds and either shifting to other types of agriculture or leaving farming entirely.

Multivariate Results

Following a preliminary review of correlations between domain satisfaction measures and husband-wife paired t-tests of all variables, separate regression equations were developed for husbands and for wives. First, the thirteen domain satisfaction measures were related to the life as a whole index to explain the relationship between satisfaction with domain measures and life as a whole. Because job satisfaction has been found to be so high among farmers, and because satisfaction with farm work was found to be so important in explaining husbands' satisfaction with life as a whole, the previous regressions were repeated after deleting satisfaction with farm work from the set of domain measures. This provided a simulation of leaving farming and identified domains which would be important in maintaining life quality if the family were no longer farming.

The equation of thirteen domain measures related to the husbands' life quality index was significant at the .000 level and had a R-square of .586; four domain measures were significant and all were positively related to life quality (Table 2). The most important domain measure was satisfaction with farm work, with a beta or standardized coefficient of .359 and a probability of .000. The other three domain measures which were significant, along with their betas, were how you feel about yourself, .277; your health, .201; and spare time, .165. No other domain measure approached significance.

TABLE 2. Regression of Husband's Life Quality from Domain Satisfaction Measures, Including Farm Work

Domain	beta	Prob. of t-value
Farm work (index)	.359***	.000
Yourself	.277***	.001
Your health	.208**	.007
Spare time: How spent	.165*	.046
Time available	.071	.434
National government	.063	.363
Goods & services	.059	.400
Family income	.046	.548
Amount of fun	-.029	.777
Your house	.020	.788
Off-farm job	-.015	.833
Family life	-.015	.860
Family activities	.014	.872
Equation R-square = .586		
F-ratio = 11.131 (p.=.000)		
Degrees of freedom = 13 & 102		

Asterisks indicate significance levels of *=p≤ .05, **=p≤ .01, and ***=p≤ .001

TABLE 3. Regression of Wives' Life Quality from Domain Satisfaction Measures, Including Farm Work

Domain	beta	Prob. of t-value
Family life	.301***	.000
Yourself	.217**	.002
Family income	.210**	.002
Amount of fun	.186*	.030
Time available	.149	.051
Farm work (index)	.146*	.031
Family activities	-.132	.092
National government	-.119	.071
Spare time: How spent	.149	.051
Your health	.084	.224
Your house	.076	.263
Your off-farm job	.064	.333
Goods & services	-.004	.957
Equation R-square = .622		
F-ratio = 12.957 (p.=.000)		
Degrees of freedom = 13 & 102		

Asterisks indicate significance levels of *=p≤ .05, **=p≤ .01, and ***=p≤ .001

When the thirteen domain measures were related to the wives' life quality index, the results had an equation R-square of .622 and were significant at the .000 level (Table 3). Five domain measures were significant at the .05 level and four others approached significance. Thus, the wives' life quality was explained by a larger number of domain measures. The most important domain was family life, with a beta of .301 and a probability of .000. Satisfaction with oneself and with family income had betas of .217 and .210, respectively, and both had probabilities of. 002. Satisfaction with the amount of fun in one's life and with farm work were also significant predictors. Two domain measures had probabilities of .051; they were satisfaction with time available and with spare time. Two other domain measures which approached significance were inversely related to life quality; they were family activities and the national government.

The wives' quality of life was not explained by as parsimonious a set of domain measures, but this could provide easier and greater adaptability to change. The major predictor of her quality of life was not as dominant as the first predictor in the husbands' equation; family life has a beta or strength of relationship of .301, compared to the husbands' equation major predictor, farm work, beta of .359. The measure which was second in importance in both the husbands' and wives' equations was satisfaction with yourself. Differing measures of the leisure domain were important in the husbands' and wives' equations. Spare time was a significant explainer of life quality in the husbands' equation, while fun was significant in the wives' equation.

TABLE 4. Regression of Husband's Life Quality from Domain Satisfaction Measures, Excluding Farm Work

Domain	beta	Prob. of t-value
Yourself	.363***	.000
Your health	.274***	.000
Spare time: How spent	.241**	.006
Goods & services	.140	.052
Family life	.082	.349
Off-farm job	-.057	.445
Family activities	.045	.632
National government	.043	.556
Amount of fun	.041	.703
Family income	.016	.842
Your house	.014	.864
Time available	-.002	.983

Equation R-square = .524
F-ratio = 9.459 (p.=.000)
Degrees of freedom = 12 & 103

Asterisks indicate significance levels of
**=p≤ .01, and ***=p≤ .001

When the husbands' and wives' equations were repeated after the deletion of the farm work domain, to identify the explainers of life quality if the family no longer farmed, there were some small changes in the results. The twelve domain measure equation for husbands yielded an equation R-square of .524 ratherthan the previous .586 and probability remained at the .000 level (Table 4). The three remaining variables of the four found significant in the previous equation continued to be significant. These were satisfaction with yourself, your health, and spare time. One other variable now approached significance, satisfaction with goods and services, which had a beta of .140 and a probability of .052.

Farm work had been a significant but less important explainer in the wives' domain measure equation. Therefore, its deletion might be expected to yield smaller changes. The twelve domain measure equation for wives yielded an equation R-square of .605 (Table 5), down slightly from the equation R-square of .622 of the first equation. The most important measures remained family life, yourself, and family income. Another significant measure was time available; amount of fun was no longer significant. Thus, one measure of the leisure domain replaced another.

TABLE 5. Regression of Wives' Life Quality from Domain Satisfaction Measures, Excluding Farm Work

Domain	beta	Prob. of t-value
Family life	.282***	.001
Yourself	.227**	.002
Family income	.210**	.002
time available	.173*	.025
Amount of fun	.162	.061
Spare time: How spent	.127	.086
Your health	.113	.107
National government	-.112	.094
Family activities	-.104	.187
Your house	.063	.356
Your off-farm job	.030	.646
Goods & services	-.030	.650

Equation R-square = .605
F-ratio = 13.129 (p.=.000)
Degrees of freedom = 12 & 103

Asterisks indicate significance levels of
*=p≤ .05, **=p≤ .01, and ***=p≤ .001

Discussion and Conclusions

Husbands and wives in dairy farm households did differ in satisfaction with several domain measures; and their satisfaction with life as a whole also approached a significant difference. The domain measures which explain their level of life satisfaction or quality also differed. The most important explainer of husbands' life quality was satisfaction with farm work; only three additional domain measures were significant—yourself, your health, and spare time. The most important explainer of the wives' life quality was satisfaction with family life; other significant domain measures were yourself, family income, and amount of fun.

The job satisfaction mean score for husbands' farm work cannot be compared directly with job satisfaction in other occupations at the same time period in the same geographic area. However, the importance of farm work in explaining the life quality of husbands on dairy farms added another dimension to the uniqueness of job satisfaction among farmers. During this period of financial crises in agriculture, it also raised a concern for those farmers who must leave farming for financial reasons. While the 12-item equation simulated leaving farming and identified other domains which could explain a reasonably similar level of life quality, other measured domains which could be vulnerable in the event of leaving farming were feelings about yourself (the farm failed so I, personally, must have failed) and health, because the stress of failure could affect health. Particular attention should be focused on maintaining satisfacfaction in the vulnerable domains if the family leaves farming.

The wives' life quality was explained by a set of domain measures which was larger in number and more like the explainers identified in previous studies. A 1975 national sample of men and women identified the following domains, in declining order of importance: amount of fun, family life, family income, yourself, your house, your job, time available, family activities, your health, spare time, national government, and goods and services (Andrews & Withey 1976). Fewer significant domains here are likely to be at least partially due to the smaller sample size. In the event that the family leaves farming, the domains explaining her quality of life would not receive the same central blow. However, important domains in her equation were still vulnerable. Farm failure would be likely to result from lower income, would be likely to decrease self esteem, and financial problems and marriage problems are often intertwined. Again, efforts should be focused on maintaining satisfaction in these vulnerable domains if the family leaves farming.

In sum, the strengths of the successful family farm are reflected in the measures of domains which contribute to the life quality of husbands and wives on dairy farms. Those strengths could change to problem areas and reduce the life quality of husbands and wives on financially stressed or failing dairy farms. Attention should be given to maintaining satisfaction in these vulnerable areas if the family undergoes a financial crisis or leaves farming.

Longitudinal studies of life quality, with additional non-farm populations added and sample divisions by financial situation, would be useful in monitoring changes in satisfaction with life domains. Increasing dissatisfaction with income, family life, health, and other measures could identify trouble spots. This would allow communities to develop new or better publicized support services to assist families in making needed adjustments to the changing financial conditions in agriculture.

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WHO PREPARES A BALANCE SHEET?
AN EXPLORATORY ANALYSIS

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Abstract

Households which prepare a personal balance sheet are compared to those that do not on the basis of seven demographic variables. It is found that preparation of a balance sheet is related to income, net worth, age, education, sex, and marital status, but not to family size. Evidence is presented suggesting that even affluent households do not see the balance sheet as a useful financial tool.

Who Prepares a Balance Sheet
An Exploratory Analysis

Textbook authors, professional financial advisors, and the popular press all agree on the value of a balance sheet in personal financial planning. The balance sheet, also called a personal financial statement or estimate of net worth, provides an inventory of a households assets and debts. The difference between total assets and total debts is considered to be an indicator of the household's financial welfare, either by itself (Griffith, 1985; Harris, 1986; Herreran, 1983; Henretta, 1978), or in combination with some measure of spending or income ("Prosperity Index", 1987; Weisbrod & Hansen, 1968).

Despite the apparent usefulness of balance sheets, there is evidence (Davis, 1987; Hira, 1986) that a substantial proportion of households do not prepare them. The purpose of this study was to investigate possible differences in demographic characteristics and attitudes between those who do prepare a balance sheet and those who do not. If differences between the two groups exist, this finding could prove useful in targeting educational programming and helping financial advisers better understand their clients.

Review of Related Literature

Empirical studies related to household wealth have focused on the dollar value and composition of personal portfolios, and change in these factors over time (Ferber & Lee, 1980; Foster & Metzen, 1983; Hefferan, 1983; Prather & Hanna, 1987; Williams and Manning, 1972). Taken together, these studies indicate that households reporting higher net worth also have higher incomes, older and better educated members, and a higher incidence of married couple families. The literature on family financial management has emphasized budget behavior and accounting practices (Beutler & Sahlberg, 1979; Davis, 1987; Godwin & Carrol, 1986; Mullis & Schnittgrund, 1982; Schnittgrund and Baker, 1983). Previous research offers very little guidance in identifying those variables which might differentiate between those who prepare a balance sheet and those who do not. The question "Who prepares a balance sheet?" does not seem to have been raised in previous studies.

Data and Methods

Data were collected in the spring of 1984 by means of a mail questionnaire sent to a sample of households in a midwestern state. A two-stage cluster sample was employed. The first stage of the sampling procedure involved drawing seven counties at random from those counties which did not include a Standard Metropolitan Statistical Area (SMSA) within their borders. The second stage involved selecting households at random from within the seven counties. Telephone listings comprised the sampling frame. Following the initial letter requesting participation, three attempts were made to contact non-respondents, in accordance with the procedures recommended by Dillman. From 1200 households, 672 usable responses were received. When ineligible households (i.e. those whose members had moved away from the state) were subtracted (n=96), the response rate was 61 percent.

Demographic characteristics of the sample are presented in Table 1. Respondents ranged in age from 18 to 94 years (x = 48.85; s.d. = 17.70). Almost half had received some formal education beyond high school; the mean education level was 2 years of post-secondary study. The mean household income before taxes fell between $20,000 and $25,000. The mean household size was 2.7 persons; 45 percent of the sample lived in households of one or two individuals. Almost three-fourths of the respondents were male; and 80 percent of the respondents were married.

Comparisons of the respondents to the population of the seven counties in 1980 indicates that people 18 to 25 years old are under-represented in the sample and people between 45 and 64 are over-represented in the sample.

Table 1. Demographic Characteristics of the Sample

Mean age of respondents	48.85 years
Mean education level	2 years post-secondary
Mean income level (midpoint of the mean category)	$22,500
Median net worth	$62,500
Mean household size	2.7 persons
Percent male	72
Percent married	80

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Selection and Measurement of Variables

The dependent variable was measured by asking respondents the following question.

Every so often, do you estimate your household's net worth, that is, do you add up the value of everything you own, then add up all your debts and compare the two to see how you are doing financially?

Respondents who answered "yes" were asked how frequently they prepared a balance sheet; those who answered "no" were asked to indicate why they did not. Frequency distributions for this set of questions are shown in Table 2. The sample was evenly split between those who answered yes ("preparers") and those who did not ("others"). Among the preparers, the majority (64 percent) reported making a balance sheet once a year. Among the others, a plurality (47 percent) indicated that they "never thought about" drawing up a financial statement.

Table 2. Preparation of a Balance Sheet

Question	Percentage of Responses
Do you estimate your household's net worth?	
Yes	50
No	50
(If yes) how often do you do this?	
once a year	64
more than once a year	28
other	7
(If no) why don't you do this?	
don't need to	26
don't know how	5
takes too much time	9
never thought about it	47
other	14

Selection of the independent variables was guided by the research on household wealth. Those demographic characteristics which have consistently a relationship to net worth were included among the independent variables. It was hypothesized that those who prepared a balance sheet and those who did not would not differ in terms of the following characteristics:

1) income
2) net worth
3) age
4) education
5) family size
6) sex of respondent
7) marital status

Household net worth was calculated by subtracting the mid-point of the debt category from the midpoint of the asset category. Those with assets less than $5,000 or greater than $1 million, and those with debts greater than $75,000 were dropped from the analysis since midpoints for these categories could not be determined. Education was measured in nine ordinal levels, ranging from "no formal education" to "a graduate degree".

Analysis

Respondents who prepared a balance sheet and those who did not were compared on the basis of the variables listed above by means of Chi-square for sex and marital status, and Student's t-tests for all other variables. Only one of the null hypotheses was supported. Family size was not related to the preparation of a balance sheet. All the other independent variables were related to the dependent variable. As indicated in Table 3, those with higher levels of income and net worth, older respondents, better educated respondents, men, and married people reported a significantly higher incidence of preparing balance sheets than did less affluent and less educated respondents, younger people, women, and those not presently married.

Table 3. Results of Analysis

Results of T-tests

Variable	Mean	Probability
Income		
Preparers	$22,500	
Others	$17,500	**
Net worth		
Preparers	$140,789	
Others	$ 84,83	**
Age		
Preparers	50.16	
Others	46.90	*
Education		
Preparers	5.24	
Others	4.88	*
Family Size		
Preparers	2.88	
Others	2.69	N.S.

Results of Chi Square

Variable	Chi-Square	Probability
Sex	12.32	**
Marital Status	8.82	**

* t-test significant at .05 level
** t-test significant at .01 level
N.S. not significant

Discussion

From this analysis it appears that it is the more affluent households that are most likely to prepare balance sheets. What cannot be determined from the simple bivariate analyses presented here is whether income, age, education, and marital status have any independent effect on the preparation of balance sheets, or whether the apparent relationships are merely artifacts of the relationships between these variables and net worth.

Both those respondents who prepared balance sheets and those who did not had (or believed they had) high levels of net worth, compared to the national averages. Those who did not prepare a balance sheet had a mean net worth of almost $85,000. For these people not having any assets to tally is hardly an excuse for not drawing up a financial statement. As indicated in Table 1, only five percent of the respondents who did not prepare balance sheets indicated they did not know how to prepare one. The majority (73 percent) of those who didn't prepare balance sheets indicated either that they saw no need to do so, or that the idea had simply never occurred to them.

The results of this study suggest that despite the emphasis which professionals and educators in family finance give to personal balance sheets, either the message is not being received by households, or else we have failed to convince our audiences and clients of the usefulness of balance sheets in personal financial planning.

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MUTUAL FUNDS: IT'S OK TO TALK ABOUT THEM!

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Abstract

This article presents the findings of a research project which suggest that publicly available data is useful and relevant to consumers when conducting an information search about mutual funds. The role of academics and extension agents in facilitating such a search is discussed.

Requests for explicit advice are often deflected by academics and extension agents who disdain offering "brand-specific" recommendations. The fact that this occurs is a tribute to the nature of universities and to the basic tenets of the extension service; that is, these institutions exist to serve the interests of the public at large without promoting the interests of specific groups or entities. However, it may be possible for academics and extension agents to offer information which is specifically pertinent and yet remain unbiased.

The authors propose that detailed and timely information can replace ambiguous information when and where appropriate. The topic of mutual fund investments may be one (of many) areas in which providing specific information may be appropriate.

At first glance, the idea of offering specific information relating to mutual fund investing might seem taboo as it would constitute an endorsement of one fund over another. Indeed, information disseminated by universities or extension agents which singles out specific mutual funds would be improper. Nevertheless, we shall argue that it is possible to lead people to specific and unbiased information about mutual funds without favoring one fund over another. While this discussion will center around mutual funds it is hoped that the reader will be able to apply the principles of information dissemination to other areas of concern to families and individuals.

INFORMATION ABOUT MUTUAL FUNDS

Technically speaking, a mutual fund is an investment company which manages and invests money for its shareholders, usually in a diversified portfolio of investment media (stocks, bonds, real estate, gold, etc.). Simply put, a mutual fund is a low-cost stock-broker/investment manager available to investors of all income levels. The problem for many investors is that the sheer number of mutual funds makes selection which is appropriate for their specific situation a difficult process at best. For example, in 1972 mutual funds numbered around 400 and by 1987 over 2,000 were in existence (Jones 1987). In fact, the number of mutual funds now outnumber individual stocks on the New York Stock Exchange.

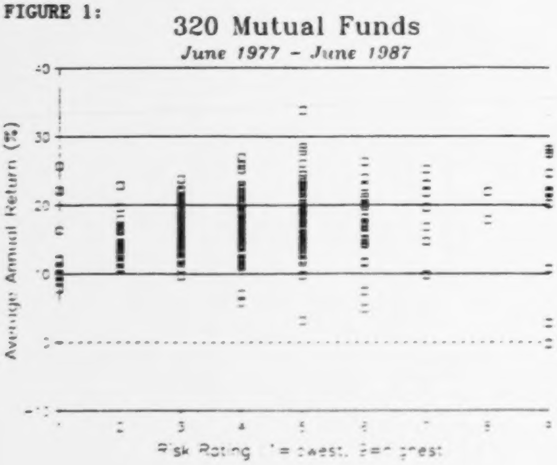
With such a large universe of funds the successful investor must comprehend the diversity and complexity of the mutual fund market. Understanding how funds differ in terms of investment philosophy and objectives, associated costs and expenses, and historical market performance promotes sensible investment decisions, particularly during periods of extreme market volatility.

Helping individuals understand the complexity of the mutual fund market need not be a taboo topic for academics and extension agents. The secret, like most things, is doing it in a proper manner.

INFORMATION SEARCH

Information can help the investor make an effective mutual fund investment decision. Information that is specific to the particular needs of a given investor can be obtained by an information search, and the role of the "advisor" is to facilitate this process. The optimal amount of consumer search has been operationalized by Maynes (1976). He has identified three conditions that indicate when a consumer search is warranted: (1) when an item represents a large outlay in the long run household budget; (2) when the cost of search is low; (3) and when there is high variation in product quality (expected mutual fund risk and return). Figure 1 suggests significant quality differences among mutual funds based on the dispersion of return relative to risk level.

FIGURE 1:



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On the basis of the foregoing three conditions, the anticipated amount and value for conducting a search is potentially high for the case of investment in mutual funds. And, if the potential value of an information search is high, it follows that the value of assisting someone in such a search would also be high. Whether or not this is a valid assumption is an empirical question which is addressed in the following section of this paper.

ESTIMATING THE VALUE OF AN INFORMATION SEARCH

At this point we will present research findings which indicate that the annually published Forbes Honor Roll is an unbiased and low-cost source of valuable information about mutual funds. In other words, academics and extension agents can recommend the Forbes Honor Roll as an excellent source of information which could be "searched" by a consumer interested in making an investment in mutual funds. Moreover, because the Honor Roll generally includes more than 10 top-performing funds, it can appropriately be used in leading people to a selective group of funds without suggesting or promoting one specific fund over another.

The research consisted of comparing the performance of the funds on the 1976 Forbes Honor Roll against the Standard & Poor's 500 Index (S&P 500) and all other common stock mutual funds available in 1976 (numbering around 320). For many individuals the primary goal of investing is to "beat the market". The S&P 500 stock index is commonly used as an index which best represents the "market" of common stocks.

The comparison period examined here covered 10 3/4 years, beginning on September 30, 1976 and ending June 30, 1987. By using this historical period it was possible to measure the actual return which could have been achieved by an investor had he/she used the 1976 Honor Roll as a mutual fund decision guide. This simulation evaluates the potential merit of using public information sources, specifically the Forbes Honor Roll (Flaherty 1976, Addis 1987), as a source of data which could be used in helping people make informed investment decisions.

As seen in Table 1, the S&P 500 had an average annual return of 15.70% over the 10 3/4 year period while the average return of the 320 stock mutual funds was 16.31 percent. The 1976 Honor Roll funds averaged, as a group (12 funds), a return of 17.38 percent. The top ranked Honor Roll fund in 1976 (based on performance prior to 1976) averaged a 20% return per year between 1976 and 1987. The dollar payoff, assuming an initial $10,000 investment, from using the Honor Roll as an investment guide in 1976 was between $8,000 and $23,000 when compared to the return of the S&P 500. Investing in one fund is more probable than investing in all the funds on the Honor Roll, hence the dollar payoff is likely to be closer to $23,000 than to $8,000.

A secondary, but by no means less important, point of comparison between the 1976 Honor Roll and all other funds was the degree of risk involved. Risk, in this case, was measured by the standard deviation around the average annual return (or deviation from the mean) for each group of funds. The Honor Roll, when used as a decision making tool, enabled investors to enhance return while reducing risk. As seen in Table 1 the standard deviation for the 12 Honor Roll funds was 2.78 percentage points and 4.32 percentage points for the 320 funds.

The academic community can appropriately guide consumers to worthwhile sources of information without comprising their valued stance of impartiality. However, to adequately help another conduct an information search requires unambiguous suggestions of where to start searching. The Forbes Honor Roll represents one possible suggestion in the search for a mutual fund.

SUMMARY

Publicly available magazines, such as Forbes or other similar sources, e.g. Money Magazine and Changing Times, contain information about mutual fund performance which is a valuable source of low-cost, unbiased information. The Forbes Honor Roll, when used in an information search to select mutual funds, was shown to recommend funds which experienced higher returns with

TABLE 1. 1976 Forves Honor Roll vs. Market & 320 Stock Mutual Funds, September 30, 1976 - June 30, 1987.

	AVERAGE ANNUAL RETURN 1976 TO 1987	ENDING VALUE OF $10,000 INVESTMENT	VALUE OF INFORMATION	STANDARD DEVIATION OF RETURN
S&P 500 INDEX	15.7%	$47,955	$0	--
320 FUND AVERAGE	16.3%	$50,697	$2,742	4.32
1976 HONOR ROLL AVERAGE	17.4%	$56,096	$8,141	2.78
TOP 1976 HONOR ROLL FUND	20.0%	$70,990	$23,035	--

lower risk than the average market return or average mutual fund return. The academic community can serve the information needs of the public by facilitating information searches. This facilitation can be accomplished by sharing and making proper use of available information.

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FACTORS RELATED TO PERCEIVED INCOME ADEQUACY AMONG MARRIED STUDENTS

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Abstract

This study was designed to determine the relationship between socioeconomic and demographic characteristics, perception, marital decision making, communication, and satisfaction variables and perceived income adequacy among student wives. Data were collected from 184 wives in student families living at Iowa State University Housing Community. Multivariate regression was used to analyze the data. The findings indicated that the wife's age, family income, perception of savings assets, financial preparedness for small emergencies were strongly related to perceived income adequacy among student wives.

Money income is the most commonly used measure of the economic status of families. Although money income contributes only partially toward the economy and the well-being of a family, it is still regarded as the family's most powerful resource and a means of achieving the desired standard of living. This high priority on money income may undermine the importance of the other human and nonhuman resources available to the family. So much value is given to money and other material goods that other limited resources such as time, space, energy, and other human and environmental resources are carelessly tapped and traded away in order to increase money resources. This is in turn used for discretionary consumption in order to attain or maintain a certain level of living.

In the past, income related studies were devoted mainly to the family's procurement and use of its income, as observed through different jobs and employment status, consumer related behavior with regard to the use of money such as allocation, saving, dissaving, and problems related to these different consumer behaviors.

In recent years, however, there seems to be a surge of interest in examining the economic situations of the family more subjectively than had been done in the past. There exists an awareness and recognition of the interplay of socio-cultural and psychological implications that affect the attitudes and behavior of the family toward money and material possessions. In defending this approach, Katona (1960) points out that socio-cultural and psychological related concepts such as perception, attitudes, values, optimism and pessimism, and satisfaction and dissatisfaction of consumers with their "living" are indeed measurable. He contends that such measures are reliable as the data that are derived from the relative changes in incomes, assets and debts. Strumpel (1973) indicated that such subjective measures also provide the researchers with some insights as to the relative importance of various domains in family living that might have shaped their perceptions, attitudes, and values.

The purpose of this study was to determine the relationship between socioeconomic and demographic characteristics, perception, marital decision making, communication, and satisfaction variables and perceived income adequacy among student wives.

Review of Literature

Kyrk (1933) believes that in order to determine whether a certain money income is adequate for the family, four questions must be answered: "Adequate where?," "Adequate when?," "Adequate for how many?," and "Adequate for what manner of living?."

Lamale (1958) contends that the change in the concept of what constitutes an adequate income is inevitable, because the concept of income adequacy tends to be affected by factors that influence the concept. Therefore, when these factors change, the concept of income adequacy will follow suit. For example, changes in the nature, distribution and level of income; in the composition of families and their place and manner of living; in the scientific knowledge and productive power of the nation; and in the social, economic, and political relationships; have caused changes in our standard of living and consequently in our concept of income adequacy.

Ackerman and Paolucci (1983) attempted to determine the extent to which income adequacy was related to satisfaction with perceived overall life quality. The findings indicated that satisfaction with the quality of life increased as income adequacy increased. A nationwide study of 224 husband-wife couples by Rettig and Bubolz (1983) revealed that social-psychological as well as economic resources were of critical importance to the quality of family life. Berry and Williams (1987) assessed the relationship between the quality of life and income satisfaction among 265 husband-wife families in Indiana. Berry and Williams reported that the most important predictor of satisfaction with the quality of life for the wives was satisfaction with the spouses and then satisfaction with family income

Socioeconomic Factors Related to Income Adequacy

The most commonly used indicants of socioeconomic status are income, occupation, and education. The amount of income alone does not explain all the variance in perceived income adequacy. According to Miller and Rein (1966) there are four factors that may affect one's income. These four factors are: changes in real income as a result of changes in prices of goods and services, in the level and structure of taxes, in social policy as well as taxation, and in non-direct payments received by family members. A survey of 574 heads of households and their wives in the Baltimore and Detroit metropolitan areas by Strumpel (1973) showed that 86% of the respondents had sufficient income to meet all bills, 42% had sufficient income to live comfortably, and 34% were satisfied with their standard of living. The study also revealed that those with higher income had higher educational background.

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Friedman and Sjoaren (1981) examined the assets of older retired Americans and its impact on income adequacy. The researchers found that income producing assets and liquid assets were very limited and the respondents perceived their income as being inadequate. Burns and Widdows (1988) attempted to determine whether the baby boom generation will be financially secure in retirement by interviewing 457 respondents between ages 19 and 37. The researchers concluded, based upon their data, that the baby boomers must either increase their savings or lower their retirement expectations to achieve financial security in retirement.

Perceived Financial Problems

It is not unusual for a family to be faced with financial problems from time to time during the family life cycle, with some experiencing it more often and more severely than others. Basically, financial problems arise when the demands on the income outstrip the money supply. Demands on family income are related to several factors, one of which is the stage of the family life cycle. According to Oppenhien (1972), and Gross et al. (1973), the highest demands on family income occur during the expanding stage of the family life cycle, which normally stretches through a period of 20 years. Bell (1971) indicated that high expenditure and demand coincide with low income of the main income earner and at any point of time if income falls short in comparison to increasing demands, money problems will surely be evident. Williams (1973) reported that families with steady incomes have fewer and less severe financial problems than those with fluctuating income.

When money problems do arise as a result of inadequate income, families will have to work on solving their problems by evaluating their values and needs and finding possible alternatives that are open to them. Kyrk (1933) outlined three ways that could be of help in avoiding further money problems: (1) by improving managerial skills, (2) by lowering the standard of living, and (3) by supplementing the income of the main income earner.

Financial Commitment

Families try to maintain their level of living through the use of installment credit. Consumer installment credit has become the largest and fastest growing form of debt in the American economy since World War II, increasing from 2.5 billion dollars to 607.7 billion dollars in 1988 (U. S. Board of Governors 1988).

A nationwide survey by Heorman (1977) revealed that 80% of married Americans had some type of credit cards. The respondents in Heorman's study indicated that credit cards were useful in emergencies, good when travelling, quick in identification, and safer than carrying cash.

Huber (1967) studied installment credit problems among public welfare recipients. He reported that debt problems were associated with money problems. Townes (1972) studied responses from 679 housewives around the intersections of the state lines of Missouri, Iowa, Nebraska, and Kansas for possible relationships between the families' socioeconomic characteristics and their levels of financial commitments. Townes' findings were in agreement with Huber's findings in that debt problems of the housewives were associated with money problems. Heck (1980) reviewed research on consumer debt problems over the past two decades and found that households with debt problems were more likely to have high debt-to-income ratios. Families with high levels of financial commitment tend to perceive their income as being inadequate.

Marital Satisfaction

Burgess and Locke (1953) contend that in spite of the increase in per capita income in the United States in comparison to that of other countries, the major cause of marital conflict in this country is still over money. According to a nationwide survey of American families by Yankelovich (1975), about 54% of the families would be classified as those who argue a lot about money. Yankelovich stated that families quarrel most frequently about overspending, poor money management techniques and the inability to keep track of where the money goes.

Hafstrom and Dunsing (1973) found that marital satisfaction was highly correlated with the respondents' satisfaction with their level of income. Williams (1973) also found high correlation between marital satisfaction and perceived income adequacy among the respondents in their study.

Marital Decision Making

According to Diesing (1958), most marital decisions are either economic or social in nature or both, and each kind tends to affect the other. Diesing (1962) outlined five different types of decisions that families face. They are: technical, economic, social, political and legal.

Wilkening and Morrison (1963) obtained responses from husbands and wives with respect to their relative involvement in 23 types of decisions pertaining to the farm, household and the family. The results indicated that 13 of 23 decisions were shared equally by husbands and wives. However, the husband was the one who more frequently made the decisions pertaining to the farm enterprise, and the wife more frequently made the decisions dealing with food, interior decorations, and social contacts.

Middleton and Putney (1960) found the equalitarian pattern existing in 75% of the 40 couples in their sample. Middleton and Putney also found that wives not employed outside the home were more dominant in the decision making than were wives employed outside the home.

Schaninger and Buss (1986) compared family finance handling, decision making, and purchasing of major durables between happily married couples and divorced couples in Illinois. Their findings showed that happily married couples exhibited greater joint influence than divorced couples in making the decision to buy major durables for the family. Lytton et al. (1984), indicated that 54% of the married couples in their sample discussed financial matters with their spouses and 75% made joint financial decisions.

The review of literature revealed very limited research which dealt directly with "perceived income adequacy," while there were extensive studies related to money problems, marital decision making, satisfactions with income, and level and standard of living. The present study was designed to determine the relationship between socioeconomic and demographic characteristics, perception, marital decision making, communication, and satisfaction variables and perceived income adequacy among student wives.

Procedure

A random sample of 258 households was drawn from 1258 student families in the Iowa State University Married Students Housing Community. An interviewer delivered in person a questionnaire on money management techniques to the wife of each couple, explained the procedure for answering it, and picked up the completed questionnaire after three days. A follow-up phone call was then made to each wife whose questionnaire was incomplete to obtain missing information. Ten percent of the households could not be reached and an additional six percent refused or failed to return the questionnaire. Of the remaining eighty-four percent, households were eliminated from the sample if the wife was a foreign student or a single parent. The final sample consisted of 184 American student couples.

Included in the questionnaire were items which tapped the spouses' satisfaction with various aspects of their financial schemes, their approach to budgeting and use of credit, their debt load and their financial preparedness for emergencies. Additional questions gathered information about decision making and decision implementing patterns of the spouses. Questions about socioeconomic and demographic characteristics of the spouses were also included.

Variables

The dependent variable in this study was income adequacy. It was obtained through the wife's response to the following question: "How adequate is your family income?" Response categories formed a 5 point scale which ranged from not at all adequate, to can afford about everything and still save some money.

The 17 independent variables were selected on the basis of previous research and were divided into five categories. The categories and the number of variables in each category were: Socioeconomic and demographic, 3; perception, 5; financial communication, 3; marital decision making, 4; and satisfaction, 2. See Table 1 for definition and coding of the independent variables.

TABLE 1. Items Used in This Study

Item	Coding of Item
Socioeconomic and Demographic	
Age of wife	1- under 18
	2- 18-19
	3- 20-21
	4- 22-23
	5- 24-25
	6- 26-29
	7- 30-34
	8- 35-39
	10- 40 and over
Education of wife	1- less than 8 years
	2- 8 years
	3- 9-11 years
	4- 12 years
	5- high school and job training
	6- 1-3 years of college
	7- college degree
	8- master's degree
	10- professional degree
	11- Ph.D.
Family income	1- less than $1,000
	2- $ 1,000 - $ 2,999
	3- $ 3,000 - $ 4,999
	4- $ 5,000 - $ 6,999
	5- $ 7,000 - $ 8,999
	6- $ 9,000 - $10,999
	7- $11,000 - $14,000
	8- $15,000 - $19,999
	10- $20,000 - $24,999
	11- $25,000 and over
Perception Variables	
Preparedness for small emergencies	1- very unprepared
	2- unprepared
	3- somewhat unprepared
	4- prepared
	5- very prepared
Savings compared to previous year	1- lower now
	2- same
	3- higher
	4- much higher
Percentage of income to debts	1- less than 1%
	2- 10-15%
	3- 16-25%
	4- 26-50%
	5- 51% or more

TABLE 1 continued

Item	Coding of Item
Perceived spending problems	1- never 2- seldom 3- sometimes 4- often 5- always
Bill payment problems	1- got behind 2- got behind, & made larger payments 3- made larger & made frequent payments 4- payments were made on time
Decision Making Variables	
Who decides-where to live	1- wife 2- husband 3- husband & wife
Who decides-friends to see	1- wife 2- husband 3- husband & wife
Who decides-wife's work	1- wife 2- husband 3- husband & wife
Who decides-money matters	1- wife 2- husband 3- husband & wife
Communication Variables	
Husband & wife discuss financial goals	1- never 2- seldom 3- sometimes 4- often 5- always
Husband & wife estimate income	1- never 2- seldom 3- sometimes 4- often 5- always
Husband & wife estimate expenses	1- never 2- seldom 3- sometimes 4- often 5- always
Satisfaction Variables	
Achievement of financial goals	1- never 2- seldom 3- sometimes 4- often 5- always
Satisfied with financial management	1- very dissatisfied 2- dissatisfied 3- somewhat dissatisfied 4- neutral 5- somewhat satisfied 6- satisfied 7- very satisfied

Method of Analysis

Multivariate regression was used to analyze the data. Beta coefficients were used to analyze the relative importance of each independent variable in the regression procedure. Variables that had a t statistic of more than 1.0 in the preliminary regressions were included in the final regression. The coefficient of multiple determination (R^2) was used to assess the proportion of variance in the dependent variable explained by all the independent variables.

Results and Discussion

Preliminary Regression--Socioeconomic and Demographic

The socioeconomic and demographic variables included the wife's age, the education of the wife and the family income. The wife's age and family income had a t statistic of more than 1.0 in the preliminary regression and were included in the final regression.

Preliminary regression--Perception

The perception variables were concerned with the wife's perception of current savings compared to previous year, financial preparedness for small emergencies, percentage of income to credit, bill payment problems, and money problems. Four variables: current savings compared to previous year, percentage of income to credit, money problems, and preparedness for small emergencies met the criteria for inclusion in the final regression.

Preliminary Regression--Financial Communication

The financial communication variables were related to husband and wife discussion of financial goals, and estimation of family income and expenditures. Husband and wife discussion of financial goals and husband and wife estimation of family income had a t statistic of more than 1.0 in the preliminary regression and were included in the final regression.

Preliminary Regression--Marital Decision Making

The decision making variables reflected decisions regarding the best place for the family to live, which friends the couple should see the most, whether the wife should work outside the home, and how the money should be used. Decisions about which friends to see and how the money was to be used met the criteria for inclusion in the final regression.

Preliminary Regression--Satisfaction

The two variables included in the preliminary regression were achievement of financial goals, and the wife's satisfaction with money management. Both items had a t statistic of more than 1.0 in the preliminary regression and were included in the final regression.

Final Regression

The results of the regression analysis of the combined items are shown in Table 2. The coefficient of multiple determination (R^2) for the sample of student wives was .37, a finding significant beyond the .0001 level. As a group, these items explain 37 percent of the variance in the dependent variable, "perceived income adequacy among student wives."

TABLE 2. Final Regression of Income Adequacy As Perceived by Student Wives.

Statement	Beta Value	t Value	p Value (significance level)
Socioeconomic and Demographic			
Wife's age	-.17	2.50	.01
Family income	.21	2.74	.01
Perception			
Money problems	-.16	-1.99	.05
Percentage of income to credit	-.02	-.25	.81
Savings compared to previous year	.15	2.23	.03
Preparedness for small emergencies	.19	2.43	.02
Financial Communication			
Husband-wife discussion of financial goals	.03	.36	.72
Husband and wife estimation of family income	10	1.41	.16
Marital Decision Making			
About which friends to see	.10	1.52	.13
About money matters	-.13	-1.92	.06
Satisfaction			
Achievement of financial goals	-.01	-.07	.94
Satisfaction with money management	.11	1.45	.15
R^2 .37*			

*Significant at the .01 level

With respect to individual items, the level of family income accounted for more of the difference in perceived income adequacy than did any of the other items. The beta for this item, .21, was significant at the .01 level. This finding suggests that the most important component of perceived income adequacy for the sample of student wives is the perception that the family income is high, and therefore, the family members can afford to buy everything they want and still save money.

Savings assets compared to previous year and financial preparedness for small emergencies were significant at the .05 level. The beta for financial preparedness for small emergencies was .19 (P<.02) and the beta for the savings assets item was .15 (P<.03). These findings suggest that families who perceive their savings assets as being higher than the previous year, and those who are financially prepared to meet small unexpected emergencies are more likely to perceive their income as being adequate compared to other families whose savings assets are lower than the previous year and who are financially unprepared to meet small unexpected emergencies.

The wife's age was significant at the .01 level but was negatively related to perceived income adequacy. The beta for this item was -.17. This finding indicates that the older the wife is, the less likely she is to perceive the family income as being adequate compared to a younger wife. One possibility, is that a young wife may expect to achieve a set of financial goals at a certain age, however, her goals were not fulfilled at an older age, therefore, she is less likely to perceive the family income as being adequate.

Frequency of money problems was negatively related to perceived income adequacy. The beta for this item was -.16 (p>.05). This finding suggests that families who face money problems frequently are less likely to perceive their income as being adequate. Another possibility, is that as a result of having money problems more often, the wife is more likely to feel insecure financially, and therefore, she is less likely to perceive the family income as being adequate.

Four other items approached statistical significance in the final regression model. Financial decisions by husbands and wives had a beta of -.13 (p>.06). Husband-wife discussion of which friends to see and husband-wife estimation of family income had similar betas, .10 for husband-wife discussion of which friends to see (p>.13) and .10 for husband-wife estimation of family income (p>.16). Satisfaction with money management had a beta of .11 (p>.15). These findings suggest that couples who make joint decisions about which friends to see and about money matters, and who are satisfied with their money management practices, are more likely to perceive their family income as being adequate.

Variables that were not significant in the final regression and thus, contributing least to perceived income adequacy were: husband-wife discussion of financial goals (beta = .03, p>.72), percentage of income to credit (beta = -.02, p>.81), and achievement of financial goals (beta = -.01, p>.94).

In general, these findings from the combined items are consistent with those in other studies where available. For instance, Friedman and Sjoaran (1981) reported that the income producing assets of older retired Americans were limited and the respondents perceived their income as being inadequate. The student wives in this study who had low income also perceived their income as being inadequate. Hafstrom and Dunsing (1973) and Williams (1973) found high correlation between marital satisfaction and perceived income adequacy among the respondents in their studies. The findings of this study also indicate that marital satisfaction was related to perceived income adequacy.

The purpose of this study was to determine the relationship between socioeconomic and demographic characteristics, perception, marital decision making, communication, and satisfaction variables and perceived income adequacy among student wives. Five variables were significant at the .05 level or less in the final regression. In addition, the final regression model explained 37 percent of the variance in the dependent variable "Perceived income adequacy."

Summary

This study was concerned with perceived income adequacy among student wives living at Iowa State Housing Community. Perceived income adequacy was obtained through the wife's response to the following question: How adequate is your family income?" The response categories ranged from not adequate at all, to can afford to buy about everything and still save some money.

The level of income, and financial preparedness for small unexpected emergencies were the two most important variables contributing to perceived income adequacy in the final regression model. Following were: the wife's age, frequency of money problems, and savings assets compared to previous year. The final items collectively explained 37 percent of the variance in the dependent variable perceived income adequacy.

Because the level of income and financial preparedness for small emergencies had the largest betas in the final regression, there is an indication that income, and financial preparedness for small emergencies do influence perceived income adequacy. It is therefore recommended that a study be undertaken using different variables in addition to those used in this study to further clarify the effect of income and financial preparedness for emergencies to perceived income adequacy. Also a study that includes the husband as well as the wife would further contribute to a greater understanding of the effect of socioeconomic and demographic characteristics, perception, communication marital decision making, and satisfaction variables in explaining perceived income adequacy among families.

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DEVELOPMENT OF MODELS OF THE LABOR FORCE PATTERNS OF SOUTHEAST ASIAN REFUGEE WOMEN[1]

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Abstract

Refugee women have an important economic role in the household and in the labor force. Previous research has emphasized variables related to their participation in the labor force and has not assessed variables related to their being employed or unemployed. This paper develops and compares models of the labor force patterns of Southeast Asian refugee women.

Southeast Asian refugees are a diverse group. From Laos, they include Hmong and other hill tribes, and the urban dwellers. From Vietnam, the largest groups are Chinese Vietnamese and ethnic Vietnamese. The influx of these refugees occurred in two stages: 1975 and 1979-81. Analyses of the characteristics of these two groups indicate that the earlier arrivals, with the exception of the Hmong, had more training, education, and English skills than the later arrivals. In Canada, there were very few who arrived in 1975. Thus, Southeast Asian refugees in Canada are the "Boat People" who were primarily Chinese Vietnamese, ethnic Vietnamese, and urban dwellers from Laos. Given the U.S.-Canadian differences in approaches to resettlement, it might be expected that the U.S. findings on economic adaptation would differ from Canadian findings.

This study focuses on women and their economic adaptation (i.e., labor force patterns). The labor force patterns include: in the labor force (employed or unemployed) vs. not in the labor force; and employed vs. unemployed. Variables used to create the models are derived from U.S. studies, with consideration given to what might be unique to the Canadian resettlement context.

Review of Literature

In traditional Vietnamese society, employment is the major role of men, not women. Some Vietnamese writers suggest that the preferred situation in North America would be for Vietnamese women to be homemakers and men the wage-earners -- a situation that had not been possible during the war years (Thuy 1976). From an historical perspective, Haines (1986) emphasizes that the Vietnamese women, while not experiencing equality per se, have had an important economic role outside of their economic role in management of the household. Thus, they have had some economic independence and this would be expected to continue in the country of resettlement.

Third World refugee or immigrant women who come to an English-speaking, developed country are considered at a disadvantage, relative to men, in economic adaptation. Reasons for this view include: women are more likely than men to arrive with no or minimal English fluency, job training, education, or work experience (Davison 1981, Deschamps 1987, Seward and McDade 1988). In addition, they may not receive English language training (ESL) due to difficulties in locating affordable child care, sponsors providing classes for the men who are considered the major wage-earners (Neuwirth and Clark 1981), lack of availability of ESL programs appropriate for women (Suhrke 1981), or urgency in achieving self-sufficiency through obtaining employment quickly which precludes time for English classes.

According to dual labor market theory, when immigrants or refugees have limited investment in human capital appropriate for the new setting (e.g., they have limited job and language skills), they are likely to find jobs in the secondary rather than the primary labor market. The primary labor market is characterized by opportunities for advancement and extensive employee benefits. On the other hand, the secondary labor market is characterized as offering minimum or low wages, sporadic and uncertain employment, and limited, if any, fringe benefits for employees. Once one is in the secondary market, chances to move between it and the primary market are limited if not impossible and would require additional training and skills (Doeringer and Piore 1971, Gordon 1972, Osterman 1975).

Because their employment has been important for their family to achieve self-sufficiency and because of their limited occupational preparation, women in the later refugee arrivals (since 1979) have tended to work in low-wage, low-status, entry-level employment which has been sporadic or part-time work (Bach and Carroll-Seguin 1986, Deschamps 1987, Suhrke 1981). These characteristics are typical of the secondary labor market. In addition, ethnic employment (e.g., Chinatowns) is a possibility for the Chinese Vietnamese in the Southeast Asian refugee group. The experience in the U.S. suggests that Southeast Asian refugee businesses have not flourished sufficiently to create opportunities for ethnic employment (Finnan and

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Cooperstein 1983). While ethnic employment may require minimal English ability, it may also isolate the refugee from the mainstream economy. Thus, refugees may find limited opportunities for learning English which would limit chances for occupational advancement.

Studies indicate that the Southeast Asian refugee women, through their paid employment, have been making an important financial contribution to their families. While their employment rates are not as high as those of the Southeast Asian men (e.g., 63 percent for men compared to 42 percent for refugee women), they are about 10 percentage points lower than the rates for women in the U.S. (Bach and Carroll-Seguin 1986, Haines 1986) or Canadian labor force (Employment and Immigration Canada 1982).

Variables Affecting Labor Force Patterns

Variables that have been or could be used in models of labor force participation include: pre-arrival characteristics (ethnicity, age, educational level, work experience, job training); resettlement context (sponsorship type, year of arrival, urban vs. rural residence, economic situation of the place of resettlement); individual and family characteristics (presence of children, household composition, marital status); skills and training acquired in country of resettlement (English fluency, occupational training or recognition of past training); and indicators of acculturation (food practices, Western customs and leisure). Some of the variables found to affect labor force participation include: those younger than 25 and older than 45 are less likely to be in the labor force; those with higher educational levels and better English fluency are likely to be in the labor force. For women, constraints on labor force participation are childcare responsibilities and ethnic or agency sponsorship. English skills do not seem to help them as much as they help men (cf. Bach and Carroll-Seguin 1986). There is some indication that the Chinese Vietnamese compared to the ethnic Vietnamese are disadvantaged in terms of economic adaptation (cf. Desbarats 1986).

Need for the Study

A reason to focus on the economic adaptation experiences of refugee women is that they are the ones who are primarily responsible for many of the immediate resettlement tasks facing their families. With limited English, limited knowledge of Western ways, and minimal transferable job skills, they may be the least prepared member of the household to manage the resettlement activities and to carry out economic contributions either in the household or in the labor force (Suhrke 1981).

Studies have tended to emphasize variables related to participation in the labor force (employed or unemployed vs. not in the labor force), and have not assessed variables related to being employed vs. unemployed (cf. Bach and Carroll-Seguin 1986, Desbarats 1986, Haines 1986). In addition, these studies have used cross-sectional data, have focused on a point in time, and have not assessed variables related to initial and longer term labor force patterns. Although gender has been used in U.S. studies of labor force patterns, there has been limited use of gender for analyzing differences in experiences of the Southeast Asian refugees who settled in Canada (cf. Indra 1987). In general, the focus has been to identify labor force rates and unemployment rates by gender, but not to study the variables affecting those patterns for women.

The purpose of this study is to create models of variables related to the refugee woman's labor force patterns. Specifically, four models will be developed:

1. variables related to initial labor force participation (employed or unemployed vs. not in the labor force);
2. variables related to longer term labor force participation;
3. variables related to initial employment status (employed vs. not employed); and
4. variables related to longer term employment status.

The initial patterns were assessed during the refugee woman's first 18 months in Canada and the longer term patterns represent 2 years later. Longitudinal or follow-up surveys, such as reported in this paper, provide a unique opportunity to observe changes over time in these labor force patterns and to assess the continuity of variables affecting those patterns for Southeast Asian refugee women.

Methods

Subjects

The subjects, 511 women, were a subsample from a larger study conducted with adult Southeast Asian refugees who settled in an urban center and in a rural community of British Columbia between 1979 and 1981. To obtain the sample, a sampling frame was generated with the assistance of a consortium of community agencies and private sponsors who were involved in refugee resettlement. A multiple wave, one-in-three probability sample was drawn, utilizing an aproach described by Mendenhall and Schaeffer (1971). This procedure allowed for stratification by ethnicity (Chinese Vietnamese vs. ethnic Vietnamese) and by sponsorship status (government vs. private). The complete census was used for the rural community and for refugees who had been in Canada less than six months. This was necessary to ensure a large enough sample for these two major variables in the adaptation study.

At the time of the follow-up interview, 13 percent of the original sample of 1348 could not be located. Those who were not reinterviewed were significantly ($p < .05$) more likely to be recently arrived, government-sponsored, single, and male. The non-reinterviewed subjects did not differ significantly from the reinterviewed ones on ethnicity, educational level, urban/rural residence, and age. Responses of female subjects who were interviewed at both times are included in this paper.

Our female subjects are young (72 percent are younger than 35), married or forced separation (76 percent), and privately sponsored (62 percent). The majority are Chinese Vietnamese (60 percent) who reside in an urban area which has a large Chinatown (76 percent). Arrival in Canada was in the last 6 months of 1979 (33 percent) or the first 6 months of 1980 (31 percent). The women identify with no religion (38 percent) or with Buddhism and other Eastern religions (33 percent). The most common living arrangements are in households of parents and children (47 percent) or in households of related people of several generations (31 percent).

Measures

Refugee consultants assisted in developing culturally appropriate instruments which were translated, back-translated, and pre-tested. For this paper, the focus was employment, training, and acculturation experiences of refugee women prior to their coming to Canada and during their first four years in Canada.

Experiences in home country. Measures include previous work experience (years, socioeconomic status of job, types of jobs, self vs. private or government employers), types of training, and educational level achieved.

Canadian training and employment. Measures include English and occupational training received; labor force status (employed, unemployed, not in labor force); typical kinds of employment; socioeconomic status of the job (Blishen and McRoberts 1976); ethnicity of employer (Asian, non-Asian); use of English at work; number of hours worked; and wages earned. Those classified as not in the labor force were women who were ill or disabled, full-time homemakers, retired, students or occupational trainees.

Variables related to employment. English ability, sponsorship (government or privately sponsored), ethnicity (Chinese Vietnamese vs. ethnic Vietnamese and Laotian), age, education (8 years or less vs. more than 8 years), marital status (married or other), household composition, acculturation measure (use of new financial practices), Vietnamese and Canadian occupational training, and prior work experience comprise these measures. English ability was self-rated as "none, some, or good". At the time of the second interview, a scale was created on difficulty in using English in six situations: phone police, fire or ambulance; rent a place to live; explain health problems to a doctor or dentist; apply for unemployment benefits or welfare; interview with an immigration officer on sponsoring relatives; and apply for a bank loan. The respondents were asked if they could handle each situation with no or little difficulty, with some difficulty, or could not handle it given their English fluency. The summed scale has a high reliability (Cronbach's alpha = .95).

Household composition was measured as parents and children vs. other categories. The other category contained singles, unrelated living together, husband and wife, three and four-generation households, related of many generations living together, related of many generations plus nonrelatives living together. This dichotomy was used to emphasize the impact on employment of women when there are children in the household and no extended family to assist in family and household management. Also, in the other households (except for singles living alone and husband and wife) there would be others who could provide employment income if the husband were unemployed. The sample size was too small in these two categories to keep them as separate categories.

The acculturation measure of new financial practices was created by counting the number of practices the respondents said they used, dividing this number by the total number of practices possible (six), and multiplying by 100. The practices included life insurance, property insurance, checking accounts, credit cards, loans, and saving money. For this composite variable, only the new (i.e., North American) modes of saving or borrowing were counted.

Data Analysis

Initially, Chi square analysis was used to screen the list of variables for their relationship to each of the dependent variables. Sponsorship status and urban vs. less urban residence were omitted at this stage. Then stepwise logistic regression (BMDP program) was used to create the four models.

For the initial labor force patterns, the original list of variables was length of time in Canada (last 6 months of 1979 and first 6 months of 1980 vs. later arrivals), age (less than 35 vs. older), education (less than 8 yrs vs. more than 8 yrs), had work experience or training in home country, English ability (some, none), had other work or training in Canada, use of new financial practices (split at a score of 17), household composition (parents and children vs. others), and marital status (married, other).

For the longer term labor force patterns, the same variables, updated according to their experiences two years later, were used. Exceptions were exclusion of work or training in home country (substituted Canadian training at the time of the second interview; substitution of Canadian employment status at the time of first interview for Canadian work experience (employed vs. other); and the scale on English ability was dichotomized at the mean.

Data Collection

The first survey extended over a six-month period, from July 1981 to January 1982 with a follow-up survey two years later. Bilingual interviewers conducted the interviews after being trained in structured interviewing techniques. Because many subjects were at work during the day, interviews were usually conducted during weekends and evenings in the refugees' homes.

Results

Description of Employment Experiences

Employment and training in home country. Over one-third of the women (37 percent) had received some job training before coming to Canada. Almost half had education beyond 8 years, with five percent having some university, and less than one percent with a university degree. Typical kinds of training included sewing, teaching, hairdressing, nursing, clerical, and handicrafts.

The majority (59 percent) had worked in their home country. While this is not the traditional view of women's roles, it reflects the necessity of providing for the family during the war years. Of those who had worked, 41 percent said they had been self-employed. Another 35 percent had been employed by the government. These jobs, using the Blishen and McRoberts' (1976) socioeconomic status of jobs scale, have a mean score of 38.94, which fits into the second lowest of the six classifications for this scale. Because the Blishen scale is designed for Canadian jobs, use of it to classify premigration employment should be viewed as a very rough estimate of past occupational status. An indepth analysis of comparative occupational status between North American and Vietnamese employment settings has yet to be done.

Canadian training. The majority (76 percent) had enrolled in an English as a Second Language (ESL) course. In terms of fluency in English, 10 percent rated their ability as good, 63 percent as fair, and 29 percent nonexistent. At the time of the second interview, they had a mean score of 13.4 on the scale for using English to handle resettlement problems. This indicates that a number of them would have difficulty in using English to handle the situations. A few (9 percent) had received job training by the time of the first interview, with another 5 percent completing training by the time of the second interview.

Canadian labor force patterns. At the time of the first interview, 51 percent were employed, 10 percent unemployed, and 39 percent were not available for employment. For the second interview two years later, the percent employed was similar (52 percent), but the percent unemployed was higher (20 percent) because there were fewer who said they were not available for employment (28 percent).

Those who were working, averaged 35.7 hrs/wk at Time 1 and 37.6 hrs/wk at Time 2. Part-time work (20 hours or less a week) was the situation for five percent of the women. Average wages were $4.88/hr and $6.09/hr for Time 1 and Time 2 interviews, respectively. They were working in jobs fitting into the lowest level of the Blishen and McRoberts scale (1976) ($M = 29.4$ and 29.5 for Time 1 and Time 2). Typical employment was seamstress, waitress, clerical worker, janitor, and fruit and vegetable picker. The majority (96 percent) worked for private employers rather than government or themselves.

The majority had an employer of non-Asian ethnicity at Time 1 (75 percent) and at Time 2 (73 percent). Likewise, the majority said they were required to use English at work some or often (62.5 percent at Time 1 and 75 percent at Time 2).

Variables Related to Labor Force Patterns

Initial work in developing the four models has been done. Variables omitted after Chi square analysis were sponsorship, urban vs. less urban residence, and time in Canada. In creating the models, the household composition variable resulted in loss of cases and Canadian training resulted in too many empty cells for this size of sample. The demographic variables of ethnicity, English fluency, age, marital status, and education were used in initial analyses for each of the models. Additional variables selected were previous employment or training experience at home or in Canada and an acculturation measure (use of new financial practices). All of these variables were used in stepwise logistic regressions to identify variables related to being in the labor force at the time of the first (Time 1) and the second interview (Time 2), and being employed or unemployed at Time 1 or Time 2. Once the initial logistic regressions were run and significant variables were identified, the analyses were rerun using the smaller group of variables for the "final" model.

In the labor force. For the Time 1 analysis, the employment experience variables were having had either work or training in their home country and having had either work or training in Canada. The variables entered as follows: English fluency, previous Canadian work or training, use of new financial practices, and education. The analysis was rerun using only this list of variables. The regression coefficients are shown in Table 1. The order in which the variables entered was: English fluency, use of new financial practices, previous Canadian work or training, and education. The Goodness of Fit Chi square and probability value for this main effects model is 21.27, $p = 0.03$ which indicates that additional variables or interactions of these variables should be considered to improve the fit of the model. Those with fluency in English, those who use new financial practices, and those with previous Canadian work or training and higher education levels seem more likely to have been in the labor force (employed or unemployed) at the time of the first interview which was within their first 18 months in Canada.

For the model of in the labor force at Time 2, the variables entered as follows: employed at Time 1, use of new financial practices, age, and English fluency. The regression coefficients are shown in Table 1. The Goodness of Fit Chi square and p-value (59.07, p = 0.07) indicate that additional variables or interactions of the current variables should be considered to improve the fit. Those with previous Canadian employment experience, those who use new financial practices, those younger than age 35, and those with English fluency seem more likely to be in the labor force.

TABLE 1. Estimated Regression Coefficients for Selected Variables and Being In the Labor Force

Variables	Coefficent	z
Time 1:		
Work or training in Canada	-0.49	-4.51
Education	0.26	2.54
English fluency	0.45	4.09
Use of new financial practices	0.55	4.99
Constant	0.64	4.88
Time 2:		
English fluency[a]	-0.29	-1.92
Employment status time 1	-0.98	-7.45
Age	-0.37	-2.90
Use of new financial practices	0.64	5.11
Constant	1.24	7.18

English fluency was a different measure at Time 2; a higher score at Time 1 meant some or good English; at Time 2, more difficulty with English.

Employed vs. unemployed. For the analysis at Time 1, the variables entered as follows: previous Canadian work or training, English fluency, use of new financial practices, and work or training in the home country. While the Goodness of Fit Chi square and probability value were quite good, (165.38, p = 0.987), there were too many cases where the cell frequencies were less than five in the model that included all of the demographic and employment variables. When the analysis was rerun using the four variables only, the Goodness of Fit statistics were 19.86, p = 0.31. The regression coefficients are shown in Table 2. In this last model, work or training at home did not enter in the stepwise logistic regression, and the order of the variables entering was: previous Canadian work or training, English fluency, and use of new financial practices. Having fluency in English and using new financial practices seem more likely for those who are employed. However, those with previous Canadian work or training are less likely to be employed at Time 1.

For the model of being employed or unemployed at the time of the second interview, only two variables (employed at Time 1 and use of new financial practices) entered in the stepwise logistic regression. Age, education, marital status, and English fluency did not enter the analysis. The regression coefficients are shown in Table 2. When the analysis was rerun using only these two variables, the Goodness of Fit Chi square was 3.097, p = 0.08. Having employment at Time 1 and using new financial practices seem more likely for those who are employed after four years in Canada.

TABLE 2. Estimated Regression Coefficients for Selected Variables and Not Being Employed

Variables	Coefficient	z
Time 1:		
Work or training in Canada	-1.05	-5.66
English fluency	-0.60	-3.16
Use of new financial practices	-0.41	-2.48
Constant	-1.52	-7.45
Time 2:		
Employment status, time 1	0.39	3.15
Use of new financial practices	-0.54	-4.38
Constant	-0.79	-6.37

Discussion

The majority of the refugee women in this study arrived in Canada with limited English fluency, no job training, and less than 12 years of education. However, they had had work experience. In terms of their Canadian activities, the majority had received English language training, and the majority were not in ethnic employment. They had limited Canadian job training and, if employed, were in low-wage, low-status employment.

In this paper four models of the labor force patterns of refugee women were developed. The current models require additional refinement as the Goodness of Fit Chi square statistics and their probabilities suggest that considering additional variables or the interactions of the current variables might improve the models.

In examining the labor force patterns during the refugee women's first 18 months in Canada, it becomes apparent that English fluency, the acculturation variable of using more financial practices, and previous Canadian work experience are important variables to consider in assessing whether the woman would be in the labor force, and if in the labor force, whether she would be employed or unemployed. Of these variables, previous Canadian work experience and using more financial practices, are included in all four models. However, the role of previous Canadian work experience or training is not consistent. It seems that refugee women who have had previous work or training in Canada were more likely to have been in the labor force, but were less likely to have been employed at the time of the first interview. By the time of the second interview, previous Canadian work experience was positively related both to being in the labor force and to being employed. This apparent inconsistency requires further investigation. Possibly, the variables of work or training at home (positively related to employment at Time 1) and work or training in Canada are interacting, and this should be accounted for in the model. Also, Canadian work experience could be separated from training to note if the inconsistent pattern occurs. Besides a change to analyses, there are other possible explanations. The unemployed subjects may have worked previously in Canada but quit the job to find better work commensurate with past or recently acquired Canadian training, or their training was too recent to show up as related to obtaining employment, or their initial work experience was viewed as short-term and not leading to desired type of work.

English fluency is in all of the models except the model of employed or unemployed at the time of the second interview. It would seem that variables such as education and age have a limited independent effect on these variables, but may have more of an indirect effect on the key variables of English fluency and previous work experience.

Variables such as household composition and marital status, ones which have had an impact on labor force patterns of women, did not enter into any of the models. In fact, it was difficult to find a situation where the refugee woman was alone without the support of extended family or spouse. Thus, presence of children may not have been a deterrent to being in the labor force, and to being employed. Reasons for this require further exploration.

Ethnicity, sponsorship, and urban vs. rural residence were also not significant in distinguishing labor force patterns for these women. Possibly, these variables had an impact on level of English fluency and on obtaining first employment, but by the time of the initial and subsequent interviews, they no longer had an independent effect (cf. Bach and Carroll-Seguin 1986, Desbarats 1986)

The acculturation measure selected, use of new financial practices, while obviously related to employment status is not dependent on employment status (Johnson 1988). One step that could be taken to clarify the role of acculturation to labor force patterns of refugee women is to see if a similar pattern occurs if another acculturation measure is substituted for this one in the current models.

Another modification might be to create a model of demographic variables as predictors of previous Canadian work experience (a variable which was significant in the models developed on the Time 1 interview data). Such a model might provide some insight on antecedent variables for having any Canadian employment experience.

Conclusions

These analyses have provided information for understanding variables affecting the labor force patterns of this group of refugee women. As previously stated, such information has not been available for Southeast Asian refugee women who resettled in Canada. Likewise, there has been limited U.S. information on variables related to women being employed or unemployed as the analyses have focused on being in or not in the labor force.

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CONSUMER PERCEPTIONS OF THE QUALITY AND SAFETY OF CONVENTIONAL AND ORGANIC FOODS

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Abstract

This paper summarizes some results from a 3-county California consumer survey. It analyzes consumer concerns - food safety, nutrition, flavor and food cost in relation to a number of socioeconomic and economic characteristics of the respondents.

Levels of concern tended, in general, to be quite similar. However, household income was statistically significant for concern about food cost (^{2} 0.05, df=1) while gender was statistically significant for concern about nutrition. Flavor was significantly more important to females than to males. Consumers, in general, perceive the healthfulness and flavor of food to have declined and rate organic foods as "better" than their conventional counterparts for reasons having to do with safety, effects on the environment, freshness, general health benefits and nutrition value.

The U.S. enjoys a veritable embarrassment of riches in the areas of food production and the gross availability of a variety of foods. Moreover, as a proportion of disposable personal income food expenditures absorb only 15 percent. One would expect therefore, that food consumers in the U.S. would evidence a high level of satisfaction with the food supply and that food procurement and consumption would engender low levels of concern and little consumer stress. For a variety of reasons, however, food consumption appears to contribute significantly to consumer stress. Accustomed patterns of food consumption have been challenged with regard to their long-run health implications - in part based on the presumed linkage between chemical residues and human health. Additionally, unequal access to food, by virtue of differences in consumer income, residential location and other constraints, create for some consumers, another source of frustration.

Various studies have charted the changes in consumer perceptions and attitudes over the past few decades. A 1965 consumer survey of 728 Pennsylvania households conducted by Bealer and Willits (Bealer and Willits 1968) found that only 15 percent of the respondents felt a great deal or some concern about pesticides, and 41.5 percent perceived pesticides as potentially dangerous to persons who eat fruits and vegetables that had been sprayed or dusted with pesticides. A 1984 survey conducted by Sachs, Blair and Richter (1987) among a comparable sample of Pennsylvania households found that the percentage that felt a great deal or some concern about pesticide use had grown to 78.7 percent, while 71.1 percent perceived danger to a person who consumed fruits and vegetables that had been sprayed or dusted with pesticides. In the 1965 study 81.5 percent of the respondents agreed with the statement that "farmers are careful with pesticides". In the 1984 survey that percentage had declined to 61.6. And only 48.9 percent of the 1984 sample believed that food purchased from retail stores had been adequately inspected compared with 94 percent in the earlier survey.

National surveys carried out by the Food Marketing Institute throughout the 1980s have consistently found high levels of concern about pesticide residues with the percentage perceiving residues as a hazard fluctuating between 77 and 73 percent (Food Marketing Institute 1985). In the Packer's Fresh Trends (1988) consumer survey 82 percent reported concern about these residues. Surprisingly, 64 percent had made no adjustments in their purchasing patterns to reflect this concern; only 18 percent had changed their purchasing patterns. That same survey showed that only 16 percent of consumers in the West reported purchasing alternative kinds of produce; i.e., hydroponic, "pesticide free" or organic.

Consumer frustration with the level of quality of various food attributes surfaced in a 1974 USDA consumer satisfaction survey, (USDA 1975). In that survey only 13.8 percent of a national sample of 1831 consumer respondents reported that they were always satisfied with the quality of fresh vegetables, and only 18.1 percent were always satisfied with the quality of fresh fruits. And a Yankelovitch, Skelly and White consumer survey conducted for the 2nd Woman's Day Family Food Study (1980) found that 68 percent of consumers surveyed believed that natural foods are healthier than processed foods even when vitamins are added although only 34 percent identified themselves as "natural food fans."

Objectives, Methods and Findings

Food being the major determinant of health, the present study was aimed at investigating the concerns of California consumers for nutrition, flavor, freshness, and food safety. The concern for food safety included concern over the presence of more than minimal levels of chemical residues, cholesterol, salt, sugar, artificial coloring, additives and preservatives, irradiation, and fat.

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Specific objectives included: identifying and estimating levels of consumer concerns about a number of food attributes; and, analyzing the relationships between consumer responses and levels of concern and various socioeconomic and demographic characteristics of consumers. The null hypotheses are that there are no significant associations between socioeconomic and demographic characteristics and levels of concern.

Methodology

The data was collected by means of a mail survey of 1950 randomly selected households in three selected California counties: Marin, Sacramento, and San Diego. The questionnaires were sent and returned during September-October of 1987 with an overall rate of return of 54 percent - 946 respondents. There was little inter-county variation in the response rate.

To add to our knowledge of consumer attitudes toward foods in the marketplace, conventional, as well as organic, the survey asked respondents to provide information about their general perceptions about the level of quality in comparison with that of five years ago, and about the importance of selected factors in food purchasing decisions. Ten food components and attributes were listed; consumers' could rank their levels of concern about these components and attributes on a 5 point scale with 1 being the lowest ranking. Cross-tabulations of the data by the various socio-economic and demographic characteristics were carried out.

Characteristics of Respondents

Table 1 presents data on respondents by sex, age, ethnicity, education, and income. Of the 946 respondents, 552 (59.6%) were female. Six hundred and eight (66.5%) were age 40 or older. Eight hundred and eight (87.8%) were European Americans; 96 (10.5%) were Asians, Afro-Americans, Hispanic or Native Americans. Seven hundred and thirty-eight (79.5%) had at least some college. Seven hundred and four (81.0%) had a yearly income of $20,000 or greater. With respect to non-responder bias, cross tabulation of 76 selected variables by week of return did not indicate any statistically significant monotonic trend differences over time - indicating minimal non-responder bias.

Nonetheless, there is less than a one-to-one measure of congruence between our sample and the socio-demographic distribution of the overall California population. Non-European ethnic groups are somewhat underrepresented, and older households are somewhat overrepresented. There appears also to be a sexual disparity among the respondents. With these qualifiers the responses can be taken as indicative of general patterns of perceptions and behavior among consumers in these California counties.

When asked to rank four concerns - nutrition, food safety, flavor and food cost by three levels of concern - "very important", "somewhat important" and "not important", consumers ranked food safety and nutrition highest, followed by concerns about flavor and cost. There is a marked difference between the level of concern for nutrition, food safety and flavor and the level of concern for food cost. The latter was rated as a very important concern by approximately 50 percent of the sample in comparison with 79.0, 80.0 and 75 percent for nutrition, safety and flavor.

TABLE 1. Sociodemographic Characteristics of Sample of California Consumers

	f	%
Sex:		
Male	374	40.4
Female	552	59.6
	926	
Age:		
20-29	96	10.4
30-39	209	22.9
40-49	205	22.4
50-59	247	16.1
60+	256	28.0
	921	
Race:		
White-Caucasian	808	87.8
Other	96	10.5
	904	
Education:		
Some school	52	5.6
High school	137	14.8
Some college	310	33.4
College graduate	196	21.1
Graduate degree	232	25.0
	927	
Income:		
<$10,000	43	5.5
$10,000-19,999	117	13.5
20,000-29,999	133	15.3
30,000-39,999	141	16.2
40,000-49,999	139	16.0
>$50,000	291	33.5
	869	

Table 2 presents cross-tabulated data on importance ratings for nutrition by the various demographic and economic characteristics. The chi-square statistic is significant for gender - a significantly higher proportion of females rating nutrition as very important. It is also significant - by level of education - with those in the lowest educational level having a significantly larger proportion in the "very important" category. The finding with respect to gender is in line with the intuitive expectation that females, who tend to be more generally in charge of the nutritional needs of households, would be more concerned with nutrition in their food purchasing considerations. On the other hand, the finding that consumers in the lowest educational group have the greatest concern for nutrition is somewhat counter-intuitive. This could likely be explained by the possibility that persons with lower educational levels feel less competent regarding their nutritional knowledge and additionally, are aware of their economic constraints in meeting the nutritional needs of household members. As well, it might be because low income respondents feel that they ought to be highly concerned about the nutritional well being of household members.

TABLE 2. "Importance" Ratings of Nutrition as a Factor When Making Food Purchasing Decisions as Reported by Sample of California Consumers.

	"Very Important" %	"Somewhat Important" %	"Not Important" %	N
Total Sample	79.3	20.2	0.4	939
SEX:*				
Male	74.5	24.9	0.5	373
Female	82.6	17.0	0.4	546
AGE:				
<20-29	69.5	29.5	1.0	95
30-39	79.9	20.1	-	209
40-49	81.3	18.2	0.5	203
50-59	81.6	18.4	-	147
60+	79.1	20.2	0.8	253
EDUCATION:*				
Some school	86.0	14.0	-	50
High school	83.2	15.3	1.5	137
Some college	80.4	19.0	0.7	306
College graduate	70.9	29.1	-	196
Graduate degree	81.8	18.2	-	231
HOUSEHOLD INCOME (1986 GROSS):				
<$10,000	84.4	15.6	-	45
10,000-19,999	81.0	18.1	0.9	116
20,000-29,999	73.7	24.8	1.5	133
30,000-39,999	78.6	21.4	-	140
40,000-49,999	78.3	21.7	-	138
>$50,000	80.8	19.2	-	291
HOUSEHOLD SIZE:				
1 Person	76.6	23.4	-	149
2 Persons	78.7	20.3	1.0	385
3 Persons	75.8	24.2	-	149
4 Persons	84.4	15.6	-	141
5+Persons	83.1	16.9	-	89
COMMUNITY SIZE:				
Rural<2,500	84.8	15.2	-	33
2,500-9,999	85.0	15.0	-	80
10,000-49,999	78.6	21.0	0.4	248
50,000-99,999	79.6	20.4	-	152
100,000-250,000	79.8	18.2	2.0	99
>250,000	75.3	24.7	-	223

* Cross-tabulations that had χ^2 significance at equal to or less than .05.

TABLE 3. "Importance" Ratings of Food Safety as a Factor When Making Food Purchasing Decisions as Reported by Sample of California Consumers.

	"Very Important" %	"Somewhat Important" %	"Not Important" %	N
Total Sample	80.2	18.1	1.7	929
SEX:				
Male	78.7	19.4	1.9	371
Female	80.9	17.4	1.7	539
AGE:				
<20-29	80.9	17.0	2.1	94
30-39	78.6	19.4	1.9	206
40-49	79.3	18.2	2.5	205
50-59	81.0	17.7	1.4	147
60+	80.6	18.2	3.0	247
EDUCATION:				
Some school	90.0	10.0	-	50
High school	81.5	16.9	1.5	130
Some college	79.3	18.7	2.0	305
College graduate	78.6	20.9	0.5	196
Graduate degree	79.5	17.5	3.1	229
HOUSEHOLD INCOME (1986 GROSS):				
<$10,000	85.4	12.2	2.4	41
10,000-19,999	81.9	16.4	1.7	116
20,000-29,999	77.1	22.1	0.8	131
30,000-39,999	79.0	18.1	2.9	138
40,000-49,999	77.4	21.9	0.7	137
>$50,000	81.0	17.3	1.7	289
HOUSEHOLD SIZE:				
1 Person	70.2	27.0	2.8	141
2 Persons	80.1	18.1	1.8	382
3 Persons	83.9	15.4	0.7	149
4 Persons	84.8	13.0	2.2	138
5+Persons	82.0	16.9	1.1	89
COMMUNITY SIZE:				
Rural<2,500	73.5	26.5	-	34
2,500-9,999	85.0	13.8	1.3	80
10,000-49,999	83.8	14.2	2.0	247
50,000-99,999	77.3	21.3	1.3	150
100,000-250,000	83.8	13.1	3.0	99
>250,000	74.3	23.9	1.8	222

Eighty percent of our sample rated food safety as "very important." This pattern of response was consistent over all configurations of demographic and economic variables. As observed in Table 3 all the age, educational and economic groups had response ratings very close to that of the overall sample. As did those for household and community size.

We expected that females would have significantly different response ratings and we expected the concern over food safety to vary directly with age - with younger respondents being less concerned than middle-aged and older persons. We would also have expected lower income consumers to be less concerned about food safety, assuming sufficiency to be more of an overriding concern. However, the cross-tabulation by income level showed no significant differences, neither did the cross-tabulation by level of education.

The importance of flavor was significantly different for a couple of the demographic characteristics. While the overall proportion rating flavor as important was 75.4 percent, for males it was only 71.8 percent compared with 77.9 percent for females. There was no significant variation between age groups. But the concern for flavor does seem to vary inversely with the level of education and the chi-square was significant for this cross-tabulation. There was no significant difference by income level.

TABLE 4. "Importance" Ratings of Flavor as a Factor When Making Food Purchasing Decisions as Reported by Sample of California Consumers.

	"Very Important" %	"Somewhat Important" %	"Not Important" %	N
Total Sample	75.4	23.7	0.9	927
SEX:*				
Male	71.8	26.6	1.6	369
Female	77.9	21.7	0.4	538
AGE:				
<20-29	76.8	22.1	1.1	95
30-39	74.1	25.4	0.5	205
40-49	76.7	22.8	0.5	202
50-59	77.4	20.5	2.1	146
60+	73.4	26.2	0.4	248
EDUCATION:*				
Some school	77.1	16.7	6.3	48
High school	77.3	22.0	0.8	132
Some college	77.0	22.4	0.7	304
College graduate	73.3	26.2	0.5	195
Graduate degree	73.8	25.8	0.4	229
HOUSEHOLD INCOME (1986 GROSS):				
<$10,000	73.2	22.0	4.9	41
10,000-19,999	72.8	25.4	1.8	114
20,000-29,999	78.2	20.3	1.5	133
30,000-39,999	74.1	25.9	-	139
40,000-49,999	73.7	26.3	-	137
>$50,000	76.7	22.6	0.7	287

* Cross-tabulations that had χ^2 significance at equal to or less than .05.

The greatest degree of diversity emerges in response ratings of food cost as an important factor in food purchasing decisions. For the overall sample, approximately 50 percent rated food cost as "very important." However, 52 percent of females compared with 44 percent of male respondents rated it as "very important", and the chi-square statistic was significant for this cross-tabulation. The chi-square was also significant for age - the importance rating varying directly with age. This might be explained by the greater expenditures necessary as families pass through the life cycle and the typical reduction of income in post-retirement years. Responses by household income are significantly differentiated, with the importance of food cost declining as household income increases. The importance of food cost is particularly high for those households with incomes below $20,000 per year. Since income levels tend to be correlated with educational attainment it is not surprising that differences in education levels significantly affect differences in importance ratings for food cost.

In general, indications are that the concerns of our sub-samples broken down by major demographic and economic categories are remarkably similar. The stark exception is the level of importance of food cost. Here we observe major differences in responses deriving, it would appear, from differences in economic circumstances.

TABLE 5. "Importance" Ratings of Cost of Food as a Factor When Making Food Purchasing Decisions as Reported by Sample of California Consumers.

	"Very Important" %	"Somewhat Important" %	"Not Important" %	N
Total Sample	49.5	43.7	6.9	932
SEX:*				
Male	44.2	46.1	9.7	371
Female	51.9	43.1	5.0	541
AGE:*				
<20-29	42.7	55.2	2.1	96
30-39	42.7	50.5	6.8	206
40-49	48.0	46.6	5.4	204
50-59	45.8	43.8	10.4	144
60+	57.6	34.0	8.4	250
EDUCATION:*				
Some school	67.3	28.6	4.1	49
High school	66.2	28.6	5.3	133
Some college	51.6	41.9	6.5	308
College graduate	39.1	51.0	9.9	192
Graduate degree	39.8	53.7	6.5	231
HOUSEHOLD INCOME (1986 GROSS):*				
<$10,000	71.1	28.9	-	45
10,000-19,999	59.5	37.9	2.6	116
20,000-29,999	55.6	37.6	6.8	133
30,000-39,999	44.6	48.9	6.5	139
40,000-49,999	42.6	46.3	11.0	136
>$50,000	42.6	49.5	8.0	289
HOUSEHOLD SIZE:				
1 Person	48.6	43.1	8.3	144
2 Persons	50.8	42.7	6.5	382
3 Persons	42.3	52.3	5.4	149
4 Persons	50.0	42.1	7.9	140
5+Persons	50.0	43.1	6.8	88
COMMUNITY SIZE:				
Rural<2,500	60.6	33.3	6.1	33
2,500-9,999	46.3	47.5	6.3	80
10,000-49,999	45.3	45.7	9.0	245
50,000-99,999	53.3	40.8	5.9	152
100,000-250,000	51.5	45.5	3.0	99
>250,000	44.4	47.1	8.5	223

* Cross-tabulations that had χ^2 significance at equal to or less than .05.

Our survey further queried consumers as to their levels of concern about a number of food constituents commonly perceived as having some potential level of risk even though they are generally recognized as safe if consumed in moderate or small amounts. These food constituents included: residues, cholesterol, salt, sugar, artificial coloring, additives and preservatives, irradiation by products, and fat.

As shown in Table 6 chemical residues elicited the highest level of concern with 62 percent of the respondents "concerned". Comparable proportions for the other constituents were: irradiation, 60 percent; fat, 52 percent; additives and preservatives, 45.2 percent; salt, 44 percent; cholesterol, 42.5 percent; sugar 41.0 percent; fiber, 35.5 percent; and artificial coloring, 33.7 percent.

Levels of concern are much higher for residues, irradiation and fat and relatively lower for artificial coloring and fiber. Among the implications of these findings are: that the pressure for agriculture to adopt more benign forms of pest and weed control will continue; and, that for food processing and distribution irradiation will not soon be a viable option. Testing for significant differences in response patterns our analysis found the chi-square statistic significant for the following: concern about cholesterol significant for age; concern about salt significant for household income; concern about irradiation significant for level of education; and, concern about fat significant for household income - low income ($20,000) and higher income households ($50,000) having higher levels of concern than middle income households.

TABLE 6. Concern About Food Constituents Perceived as Potential Risks [a]

	Unconcerned	Concerned	Neutral	Concerned	Concerned
Concerns					
Residues	2.5	4.0	7.4	23.9	62.3
Cholesterol[1]	4.0	4.8	14.6	34.2	42.5
Salt[2]	3.9	5.3	15.1	31.6	44.0
Sugar	3.7	4.3	18.9	32.1	41.0
Artificial Coloring	8.2	9.1	22.5	26.5	33.7
Additives & Preservatives	3.6	4.8	15.2	31.3	45.2
Irradiation[3]	5.3	5.2	10.7	18.8	60.0
Fiber	3.8	4.9	19.2	36.6	35.5
Fat[4]	3.2	3.3	12.4	29.2	51.9

[a] Fiber departs from the general pattern in that consumption of more fiber is now generally recommended for improved health. Thus, the risk factor is for inadequate levels of fiber.

* Chi-square statistic significant at a level of .05 or less.

N = 932

[1] Significant for age.

[2] Significant for income.

[3] Significant for level of education.

[4] Significant for income.

Perception of Conventional vs Organic Foods

In a general comparison of conventional and organic foods, 39.4 percent of our respondents perceive organic foods as better than conventional, while 24.2 percent perceive conventional and organic foods as about the same. Only five percent perceive organic foods as being worse than conventional foods. This positive perception of organic foods in comparison with their conventional counterparts, no doubt, reflects two sets of phenomena. On the one hand, consumers have come to perceive conventional foods as more risky due to their subjective estimates of the probability of chemical contamination. On the other hand, the perception of organic foods in terms of overall quality appears to have improved over time.

Perception and Usage of Organic Foods

Our study hypothesized a set of perceived attributes as motivating organic food users to purchase organic foods. These included; safety, general health benefits, nutrition value, flavor, freshness, general appearance and the effects of associated production practices on the environment. Consumers were asked to rate these values from "not important" to "very important" on a 5-level rating scale.

Clearly, from Table 7 the perceived advantage of organic foods with respect to safety is a key motivator - with 90 percent rating it very important or important. The effect of production practices on the environment is also a key factor for 82.4 percent of the user respondents. Attributes related to general health benefits, freshness, and nutrition value are also strong motivators for organic food users. Of lesser importance were perceived attributes related to flavor and even less so to general appearance. So, for what might be considered the innovative user group of organic food consumers esthetic appeal is of much less significance than the perceived intrinsic values related to human health and environmental preservation.

TABLE 7. Values Associated with Buying Organic Food

	Not Important	Somewhat Unimportant	Somewhat Important	Important	Very Important
Safer	.6	1.5	7.1	27.0	63.8
General Health Benefits	.3	2.3	7.8	33.4	56.1
Nutrition Value	.9	3.6	9.5	29.7	56.4
Flavor	1.2	2.1	14.1	33.5	49.1
Freshness	1.2	3.0	4.5	32.9	58.5
General Appearance	4.8	11.3	28.4	34.0	21.5
Effect on Environment	2.1	2.7	12.7	23.3	59.1

N=330

Conclusions and Implications

Our study indicates that, based on our sample, California consumers have high levels of concern about their food system. These concerns have to do generally with perceptions that there has been a diminution of quality in the conventional food system, and, more specifically, with concerns about health and safety. These concerns have ramifications for public policy as well as for the food production and marketing system. We can reasonably anticipate continued pressure from consumers and their organized advocates for the establishment of more stringent safety standards particularly regarding residues. As well, there will be pressure for more intensive public monitoring of the food supply and for more rigorous enforcement through testing and the imposition of economic disincentives.

But market driven forces will also work changes in the food system largely through private decisions. Already, many supermarket chains have commissioned private laboratories to test products destined for their retail shelves. Other chains have opposed this procedure as redundant and as a questionable marketing tactic. And the California Legislature is considering a bill that would require public sector monitoring of the private certification systems. In any case, innovations in the production, distribution and marketing of food products in response to consumers' safety concerns will occur at an increasing rate. For example, organically grown products may find greater acceptability in the conventional food marketing system. This would increase the incentive for organic production. The indications are that sales of organic products would increase with their greater availability.

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APPLICATION OF THE CONSUMER DIFFUSION OF INNOVATION MODEL TO TEACHERS' ADOPTION OF MICROCOMPUTERS

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Abstract

Access to computers is a first step in implementing them into classrooms. Drawing on data from a survey of home economics teachers, the authors describe the characteristics of adoption of computers by schools and teachers and identify factors influencing each. Teachers were less involved in adoption of computers than initially posited. They were more influential in determining adoption of computers for their departments than for the school in general. These results imply that there is much more room for involving teachers in the computer adoption process. Involvement could subsequently increase teachers' use of computers.

Introduction

Initially, computers looked as though they would be a real boon to education: many saw this innovation as an opportunity to free teachers and students from routine work, allowing them to focus on higher levels of activity and thinking. However, Dronka (1985) claims that the diffusion of microcomputers in schools seems to be on a plateau. Knupfer (1988) suggests that the way this innovation has been implemented, rather than the capability of computers, may be at the root of the problem.

The purposes of this paper are to describe computer adoption by schools and home economics teachers and to identify the factors influencing adoption. We define adoption as the presence or absence of computers in the school.

The diffusion of innovation literature may be profitably used to suggest factors influencing teachers' and schools' adoption of microcomputers. In order to apply the diffusion of innovation model to predict computer adoption by teachers, however, certain assumptions are requisite. We assume that teachers have a substantial degree of autonomy in making purchasing decisions, especially for their own departments. Furthermore, we assume that teachers influence the purchase decisions of administrators which are made to accommodate the school in general.

The literature on diffusion of innovation among consumers suggests that characteristics of teachers themselves would be crucial to the adoption and use of computers in schools. For example, teachers with rich experience using other electronic equipment would be more likely to adopt computers than those with less experience because new product innovators tend to be heavy users of other products within the product category (Hirschman, 1980; Frank, Massey and Morrison, 1964). In research conducted by Dickerson and Gentry (1983) about the purchase of home computers, innovators or early adopters were middle-aged, had more education, and had more experience with technical products than consumers in general. Likewise, it seems reasonable to assume that teachers who have recently completed, or updated, their education are much more likely to have received training in computer use than people who graduated earlier. If this training was a positive experience, then teachers are more likely to use what they have learned in their classrooms (Knupfer, 1987), and this tendency will further computer adoption.

The lack of adequate funding for software is a problem and has affected computer use in small schools and departments, where teachers lack the support mechanisms that encourage successful integration efforts. Bozeman and House (1988) noted that larger schools or districts are likely to have a media specialist to assist teachers in computer purchase, software selection and use. Moreover, larger school districts generally draw from a variety of funding sources to purchase computers and support their use.

The objectives of this paper are to 1) describe microcomputer adoption by schools and home economics departments and their use by home economics teachers and 2) to determine whether teachers' and schools' characteristics and funding for software influence computer adoption by schools and departments.

Methodology

Sample

In 1986, we mailed questionnaires to all home economics teachers, grades six through twelve, (n=146), in one region of a western state. Ninety teachers returned questionnaires for a response rate of 61.64 percent. We considered eighty-six questionnaires usable.

Data

We designed the questionnaires using Dillman's (1978) "Total Design Method." We asked teachers to consider all home economics classes taught during the current semester when responding to the questions. The questionnaire consisted of four parts. We obtained information about 1) teachers' access to and use of computers; 2) teachers' attitudes about computers; 3) the teachers' own computer background; and 4) demographic information and description of teaching responsibilities. We adopted some of the questions on the questionnaire from those developed by Petrich (1984). The validity of other questions was analyzed with a panel of teacher educators and field tests conducted with agricultural education teachers.

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Independent Variables

Definitions of the independent variables and their expected relationships with the dependent variables are listed in Tables 1 and 2. Most of the independent variables are self-explanatory, but we defined urban areas as those with populations greater than 10,000. The measure of experience with technical products and services was adapted from Dickerson and Gentry (1983). We listed twenty types of electronic equipment and services including telephone answering services, call waiting/call forwarding, computer prepared income tax statements, microwave oven, video tv games, digital computer panel in car, and compact disc players, among others. We asked respondents to indicate all of the equipment in the list that they had used.

The measures of attitudes about computers were derived from a scale adapted from one developed and modified by Ahl (1976), Lichtman (1979), and Ellsworth and Bowman (1982). Ellsworth and Bowman (1982) found the reliability was .85 on a one-month test-retest, and the internal consistency on the first testing was 0.77. In an effort to force respondents to make a choice, we removed the "neither agree nor disagree" category from the original list for this study.[1] The responses to these questions were factor analyzed using varimax rotation. We identified six factors, but the last factor, "computers are beyond the understanding of the average person," was comprised of only one variable and thus was used separately. It had a factor loading of .76 and explained 6.5 percent of the variance. After preliminary analyses only this factor was included as an independent variable in subsequent analyses.

Dependent Variables

The dependent variables were dichotomous, indicating whether or not there was a computer for instructional use in the school but not in the home economics department, and second, whether or not a computer existed in the home economics department. Table 1 provides frequencies.

Data Analysis

To address the first objective, the data were described with frequencies and means as appropriate. To address the second objective, we conducted logit analyses with the binomial dependent variables "computer present in the school" and "computer present in the classroom" as dependent variables.

Logit analysis has been developed to analyze categorical dependent variables because regression analysis results in heteroscedastic estimates. The interpretation is similar to that of regression analysis but the logit coefficients are logs of the probability that one of the dependent outcomes will result. These coefficients have no intuitive meaning but provide the correct sign and relative magnitude of relationship. The coefficients may be converted to marginal effects for a more meaningful interpretation (Hrozencik, 1984).

Results

Sample Description

Approximately 60 percent of respondents held either a bachelor's degree or a bachelor's plus 15 credits (Table 1). Another fifth had a master's degree. Only three (3.5 percent) had a doctorate or 60 credits. The teachers were well experienced: almost half, 48.8 percent (42), had taught for 11 years or more. More than half of the sample taught grades 9 through 12.

Twenty (23.3 percent) of the teachers reported having computers at home (Table 1); teachers had taken approximately 1.5 computer classes (including those who did not have computers at home) (Table 2). They had used more than 6 of the 20 types of electronic equipment (Table 2). Furthermore, the teachers held positive attitudes toward computers (Table 2). They deemed computers useful and felt that computers could be understood by average people.

The enrollment of schools in which sample members taught was varied; however, 70.1 percent of the respondents taught in schools with enrollments of 1,000 or fewer (Table 1). The sample contained teachers from approximately equal numbers of urban and rural schools. On average there were 1.7 teachers per department (Table 2).

Adoption of computers

Fifty-eight percent of the home economics teachers reported having access to computers at school. Nearly 20 percent had a computer(s) located in the classroom, while 38 percent had computers available to them for classroom use but not placed in their classrooms. In addition, most teachers had some form of funding with which to buy software. Local district funding was more common than vocational education funding (Table 1). On average teachers had 1.2 sources of funding (Table 2).

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[1] The items in the scale are listed below in abbreviated form:

Computers...
- Are error free, its the operator*
- Complicate simple operations
- Someday I'll own one*
- Make mistakes 10% of time
- Improve law enforcement*
- Country would be better without
- Improve education*
- Create and eliminate jobs*
- Protect privacy of data*
- Cannot escape influence*
- May take my job someday
- Are a tool*
- Are useful in rating credit*
- Will improve health care*
- Eliminate low-skill jobs*
- Isolate people
- Are beyond understanding

* Scoring was reversed

TABLE 1. Frequencies of Categorical Variables

Variables	Frequency	Percent	Expected Sign Adoption
Education level			
Bachelors	21	24.7	+
Bachelors plus 15 credits	30	35.3	
Masters	18	21.2	
Masters plus 15 credits	8	9.4	
Masters plus 30 credits	5	5.9	
Doctorate or 60 credits	3	3.5	
	86	100.0	
Number of years taught			
1 or less	5	5.9	-
2 - 4	12	14.1	
5 - 10	26	30.6	
11 or more	42	49.4	
	86	100.0	
Ownership and use of computers			
Own and use	13	15.1	+
Own and don't use	7	8.1	
Don't own	66	76.8	
	86	100.0	
School enrollment			
150 or less	5	5.8	+
151 to 500	32	37.2	
501 to 1000	24	27.9	
1001 to 1500	4	4.7	
1501 to 2000	10	11.6	
2001 to 2500	8	9.3	
2501 to more	3	3.5	
	86	100.0	
School location			
Urban	46	53.5	+
Rural	40	46.5	
	86	100.0	
Local district funding of computer software			
Yes	53	61.6	+
No	33	38.4	
	86	100.0	
Vocational education funding of computer software			
Yes	20	23.3	+
No	66	76.7	
	86	100.0	
Computer present in school			
No	36	50.0	
Yes	36	50.0	
	72	100.0	
Computer present in department			
No	68	80.0	
Yes	17	20.0	
	85	100.0	

The results of the logit analyses are presented in Tables 3 and 4. All of the equations were statistically significant and the pseudo-R^2s indicate that the models explained between 33 and 67 percent of the variance in the dependent variables.

To determine which factors influenced whether or not computers had been adopted by the school (but not the home economics department), we estimated the model in Table 3. None of the demographic characteristics of teachers influenced whether or not the school had purchased computers for instructional use. The probability of having a computer in the school declined with the size of the home economics department. An extra teacher reduced the probability of having a computer in the school (and not the department) by 13 percent. Urban schools were nearly 10 percent more likely than rural schools to have computers ($p \leq .11$). Local district funding of software was particularly salient in raising the likelihood of schools' adoptions of computers. Local district funding of software increased the probability of schools' having a computer by 11 percent over other types of funding sources.

TABLE 2. Means and Standard Deviations of Interval Level Dependent and Independent Variables

Variable	n	Mean (Standard Deviation)	Expected Sign Adoption
Number of computer classes taken by teacher	86	1.51 (1.31)	+
Number of types of electronic equipment (excluding computers) used by teacher	86	6.34 (3.36)	+
Belief that computers are beyond the understanding of the average person	86	3.30 (.63)	-
Number of teachers per department	86	1.66 (1.08)	+

The results of the logit analysis of whether or not microcomputers were located in home economics classrooms, rather than only in the school, are presented in Table 4. The probability of having a computer in the classroom increased with the number of computer classes taken by teachers. Contrary to what was expected, this was the only demographic variable that influenced the probability of having a classroom computer.

TABLE 3. Results of logit analysis, dependent variable—has computer in school

	Equation[a]	
Independent Variable	1	ME
Demographic characteristics		
Teaching experience	-.21 (.30)	
Computers are beyond understanding	-.59 (.46)	
Computer classes taken	-.11 (.36)	
School characteristics		
Teachers per department	-.94** (.42)	-.13
Urban	.43 (.27)	.09
Funding		
Local district funding	.55* (.32)	.11
Constant	3.67** (1.90)	
Likelihood ratio test (X2)	32.59***	
Likelihood ratio index (Pseudo-R2)	.33	
N	72	

[a] Standard error of coefficients appear in parentheses and significance levels are indicated as * $p \leq .10$, ** $p \leq .05$, *** $p \leq .01$, **** $p \leq .001$.

School enrollment was as important as number of computer classes taken in predicting classroom presence of computers, with larger schools being more likely than smaller schools to have computers in home economics classrooms. An even stronger predictor of classroom adoption was the number of teachers per department (see equation 2, Table 4). School enrollment and teachers per department are so highly correlated that separate equations were used to show their effects on computer adoption. We felt it was important to include them both because school size often masks the importance of the size of the department. Home economics programs in urban and rural schools were equally as likely to have computers in their classrooms.

TABLE 4. Results of logit analysis, dependent variable--Personal computer in department

	Equation[a]			
Independent Variable	1	ME_1	2	ME_2
Demographic characteristics				
Teaching experience	-.15 (.51)		-.35 (.57)	
Education level	-.18 (.41)		-.30 (.47)	
Own and use computer	.07 (.12)		.01 (.14)	
Computer classes taken	.62** (.31)	.09	.52 (.36)	.08
Other equipment used	-.11 (.13)		-.16 .16)	
School characteristics				
School enrollment	.61* (.32)	.02		
Teachers per department			1.50*** (.54)	.06
Urban	-.18 (.52)		-.29 (.53)	
Funding				
Vocational education funds	1.58**** (.45)	.79	1.30**** (.48)	.69
Constant	2.58 (1.75)		2.0 (1.72)	
Likelihood ratio test (X2)	71.01****		80.46****	
Likelihood ratio index (pseudo-R2)	.60		.67	
N	86		86	

[a] Standard error of coefficients appear in parentheses and significance levels are indicated as *p≤ .10, **p≤ .05, ***p≤ .01, ****p≤ .001.

In Equation 1, the strongest predictor of having computers in classrooms was the availability of vocational education funds to purchase computer software. Vocational school funding of software increased the probability of having a computer in the classroom in both equations but was stronger in the first than second equation probably because of its correlation with number of teachers in the department. In the first and second equations, departments with vocational funds were 79 and 69 percent, respectively, more likely to have computers than departments lacking such funds.

Conclusion And Discussion

The results imply that the adoption of computers in schools differs from adoption by individual consumers because teachers' characteristics did not have as much influence as characteristics of consumers in similar circumstances adoption of microcomputers in the home economics department differs from adoption in the school, however, because at least one demographic characteristic of teachers influenced adoption by the department, whereas no teacher characteristics influenced adoption in the school.

From this we conclude that teachers are much less autonomous than we assumed at the outset and have much less input than administrators in the purchase of computers for either the school or classroom. Therefore, use of the diffusion of innovation model was not as fruitful as we had thought it might be. On the other hand, analyzed with the model, these data provide indirect evidence about teacher versus administrator inputs into computer purchase decisions. Thus, they confirm the speculations of others, namely that teachers have lacked "ownership" in the new technology, a situation which has led to a virtual halt in computer use (Knupfer, 1988; Cuban, 1986; Fullan, 1982). As Woodrich (1988) summarized, "Too often, decisions regarding types of computers to be purchased and allocation of resources has not been the result of careful planning by groups of interested, aware staff members, who are knowledgeable and committed to the effective use of instructional technology" (p. 270).

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RESOURCES USED BY FAMILIES TO SAVE TIME SPENT ON MEAL PREPARATION: A COMPARISON IN SINGLE PARENT, TWO-EARNER, AND ONE EARNER-FAMILIES

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Abstract

Possible strategies used by three types of households to reduce food preparation time are explored. Single parents spent the least time and reduced their level of involvement in food preparation, two-earners used market substitutes, and one-earners spent more time on food preparation and prepared more meals at home.

The number of women who are employed and/or single parents has been steadily increasing. In 1975, 44 percent of family households had two-earners. This number increased to 54 percent by 1985 (U. S. Bureau of the Census, 1985). Family households maintained by one parent doubled between 1970 and 1986, from 13 to 26 percent. Of the one parent families, 87.8 percent are headed by women (U. S. Bureau of the Census 1987). These trends place burdens on families and especially on the homemaker as time becomes a very limited resource. There are tasks that need to be completed in each household, and since time is so limited for employed homemakers strategies must be devised to maximize the use of their time.

One of the ways that employed homemakers and single parents could save time is by having other family members share some of the household work. While the homemaker and other family members are experiencing changes in attitude towards a more egalitarian division of household work, this attitude change is not reflected in the actual division of household work. Several researchers have examined household time use and their findings indicate that most of the responsibility for household work is still assumed by the woman even when she is employed full time (Berardo, Shehan, and Leslie 1987; Berk 1985; Lawrence, Draughn, Tasker, and Wozniak 1987; Nickols and Fox 1983; Robinson 1977; Rowland, Nickols and Dodder 1986; Walker and Woods 1976). Other researchers have found that, on the average, 79 percent of household work is performed by the wife (Berardo, Shehan, and Leslie 1987; Rexroat and Shehan 1987). These findings may be attributed to the status of the homemaker's role in our society. Contributions of women's family work tend to be minimized by both women and men (Hare-Mustin 1988).

Food consumption is a basic need of life. Previous research has shown food preparation to be one of the most time consuming functions in the household (Lovingood 1981, Robinson 1977). Researchers have found that one of the major adjustments made when the homemaker is employed is for homemakers to decrease the amount of time spent on food prepared at home (Goebel and Hennon 1983; Nickols and Fox 1983; Ortiz, MacDonald, Ackerman, and Goebel 1981; Peterson 1979). Employed homemakers have been found to use several strategies to reduce time spent in food preparation including; (a) eating meals away from home (Bellante and Foster 1984; Nickols and Fox 1983; Ortiz, MacDonald, Ackerman, and Goebel 1981; Trotter 1980), (b) preparing food ahead of time for future use (Nickols and Fox 1983), (c) preparing fewer meals (Nickols and Fox 1983) (d) cooking quickly prepared dishes (Jackson, McDaniel, and Rao 1985; Hafstrom and Schram 1983; Reilly 1982; Sanik and Mauldin 1986), and (e) using disposable kitchen products (Nickols and Fox 1983).

Not all researchers, however, agree on the types of resources homemakers rely on to save time on food preparation. Goebel and Hennon (1983) and Schexnayder (1980) did not find that employed homemakers eat a larger number of meals away from home. Other researchers have not found significant relationships between work status and convenience food consumption (Nickols and Fox 1983; Reilly 1982; Richardson, Pearson, and Capps 1985), or work status and the ownership of time saving consumer durables (Lovingood and McCullough 1986, Nickols and Fox 1983, Reilly 1982).

Spouses do not significantly increase their contributions to household work when the homemaker is employed (Geerken and Gove 1983; Kingston and Nock 1985; Nickols and Fox 1983; Sanik 1981). Nickols and Metzen (1982) found a slight increase in the time husbands spent on housework per week between 1968 and 1973. However the amount of actual time was very small and was positively related to the homemaker's hourly earnings. A number of other researchers (Berk 1985, Coverman 1985, Perlmutter and Wampler 1985, Peterson 1979), found only a slight influence of homemaker's employment on spouse's domestic labor participation. Shamir (1986) found that women, even those who are employed, spend the greatest time on meal preparation when compared to employed or nonemployed males.

Children may help with household tasks but their contributions to the total work load is quite small. The child's age and sex and the employment of the mother are the most important variables controlling the amount of time children spent on household tasks (Cogle and Tasker 1982, Geerken and Gove 1983; Peters 1985, Peters and Haldeman 1987, Peterson 1979). Greif (1985) found that daughters help with household chores more often than sons. Children, however, are not involved in a lot of housework.

Research pertaining to strategies single parents use to save time on food preparation is scarce. Single parents must make adjustments across a broad range of activities which contributes to a high incidence of work/family role strain (Burden 1986). Researchers have also found that female headed single parent households spend less time in food preparation (Peters and Haldeman 1987; Rowland, Nickols and Dodder 1986; Sanik and Mauldin 1986) and eat out more often than two parent households (Lee and Brown 1986; Prochaska and Schrimper 1973).

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Theoretical Base for the Study

Systems theory, and more specifically the Ecosystems Approach offers the researcher a wholistic framework for understanding changes within the family system. The ecosystems approach combines the biological as well as the sociological concepts of human ecology (Andrews, Bubolz, and Paolucci 1980). Employment and/or single parenthood of the homemaker forces the household to reorganize and adapt as the time available to the homemaker becomes more limited. The family, or Human Environed Unit maintains itself in equilibrium within the Human Behavioral Unit, the Human Constructed Unit, and the Natural Environment (Bubolz, Eicher, and Sontag 1979). When changes occur in the family system a disequilibrium occurs that creates stress. Positive feedback provides the family system with constructive, system-enhancing information about the changes that created the disequilibrium so that the system can grow, create, innovate, and adapt (Bertalanffy 1968). Based on the Ecosystems Approach, a household can utilize change or crisis for positive growth and adaptation (Andrews, Bubolz, and Paolucci 1980). Such adaptation can result in increasing the number of market substitutes, time saving appliances, and disposables used by the household when the time available for food preparation is decreased.

Purpose of the Study

The purpose of this study was to examine differences in the use of resources to save time spent on food preparation in three distinctive family types currently found in the general population: Single parent, two-earner, and one-earner families. Hypotheses were organized around four different types of strategies homemakers might use to save time on food preparation:

1. Reducing the homemaker's own time or increasing the time other household members spend in meal preparation.

2. Reducing the level of involvement in meal preparation, by: (a) Reducing the number of meals prepared at home, (b) reducing the total number of meals consumed by household members, (c) reducing the number of items served per meal, and (d) reducing the number of times household members shop for food.

3. Increasing use of techniques that require planning ahead to subsequently save time in meal preparation such as; (a) freezing food and (b) preparing food ahead.

4. Increasing use of market substitutes in meal preparation such as: (a) using convenience foods (foods that were identified by the homemaker as requiring no preparation or limited preparation techniques), (b) using time saving consumer durables (frost free refrigerators, self or continuous cleaning oven, freezer, microwave oven, dishwasher, garbage disposal, and trash compactor), (c) using disposables (disposable cooking, serving and baking dishes, and aluminum foil), and (d) eating meals away from home (including where the meals were eaten and what the meals cost).

Method

The data for the study were collected in 1977-1978 from the California portion of the Northeastern Regional Research Project NE-113 entitled: "An Interstate Urban-Rural Comparison of Families' Time Use" which was funded by the California Agricultural Experiment Station at the University of California at Davis. The California component of the NE-113 project was unique because it contained a single parent two child sample, in addition to the two parent two child sample.

The two parent samples were randomly selected from city and telephone directories in the Sacramento metropolitan area and from Sacramento, Yolo, Sutter, and Solano counties. Households were stratified according to the age of the youngest child, season of the year, and day of the week. Of the 210 possible two parent households 15 households had both spouses unemployed, and therefore were excluded from this study. Homemakers and spouses working for 15 or more hours per week were considered employed.

The single parent two child sample was identified by word of mouth, advertising and other general methods of solicitation. The sample was drawn primarily from the urban area but some cases were from the rural areas. This method of selection is not totally random, which somewhat limits the generalization of results obtained using these data.

The total number of households used in this study included 81 single parent families, 68 two-earner families, and 127 one-earner families. The 1976 Annual Housing Survey of the Sacramento Standard Metropolitan Statistical Area was used to generate weights for each stratum so that each family would be representative of the proportion of families with similar characteristics in the general population (Lovingood 1981).

Two instruments were used for data collection: (a) A time use chart, to record activities of five minutes or longer for each family member six years of age and older in 18 predefined categories; and (b) a nine page survey questionnaire, to elicit information concerning the family's demographic characteristics, and housing environment (Lovingood 1981). The reliability and validity of time diary data have been well documented. Robinson (1977) compared time diary techniques to direct and indirect observational methods and found that the data were very similar at the aggregate level. In another study, Nickols and

Fox (1983) compared their mean times for activities to results obtained by Robinson and by Walker and Woods (1976) and found consistent results among the studies.

Two personal interviews were conducted with each homemaker in the household. The interviewer went over the previous day's activities (day one), and instructed the homemaker on the correct way of filling out the time use chart. In addition, the interviewer recorded data related to meal preparation during the first interview as part of the survey questionnaire. The homemaker then recorded the time use data for all members of the household six years old and older on the following day, and consulted with other members for accuracy. Two days later the interviewer returned to collect the second time use chart, which had been filled out by the homemaker on the previous day (day two). The rest of the survey questionnaire was also administered at that time. The instruments were reviewed for omissions by the interviewer in the presence of the homemaker, and corrections were recorded.

Hypotheses were tested for significance using the statistical procedures of analysis of variance and analysis of covariance. If significant results were obtained the Tukey's HSD, or Honestly Significant Difference Test, for post hoc comparisons was calculated to identify the source of the difference. The probability level of significance for all analyses was set at the $p<.05$ level.

For the analysis of covariance, two covariates were used which have been found to significantly effect the amount of time the homemaker spends on food preparation or the percentage of meals eaten away from home; (a) age of the youngest child (Nickols and Fox 1983; Ortiz, MacDonald, Ackerman, and Goebel 1981; Prochaska and Schrimper 1973; Sanik 1981), and (b) family income (Lawrence, Draughn, Tasker, and Wozniak 1987; Nickols and Fox 1983; Ortiz, MacDonald, Ackerman, and Goebel 1981; Peterson 1979).

Description of the sample

Over 92 percent of the homemakers in each family type were women. The mean age of the homemakers was similar across all three groups, ranging from 34 years in single parent families to 35.5 years in two-earner families. The parents in the sample were moderately well educated, with over half of the homemakers and spouses having completed at least some college in each family type. The percentage of homemakers who had not completed high school was higher in single parent families (14.4%) than in one-earner (11.1%) or two-earner (5.1%) families. Educational levels of the spouses in two parent families were similar except that the spouses in one-earner families were more likely to have failed to complete high school (12.0%) than were those in two-earner families (5.4%).

The median income was $11,799 for single parent households, $26,009 for two earner households, and $21,024 for one-earner households. These median incomes were 129.8% 117.6%, and 130.1% of the National median incomes for the three family types in 1978, the year in which the data were collected (U.S. Bureau of the Census 1980).

Results

Food Preparation Time

Analyses of covariance were used to assess differences in time spent on meal preparation by the homemaker, spouse, children, and all family members in single parent, two-earner and one-earner families. Homemakers in single parent families spent significantly less time on food preparation (50 minutes), than homemakers in two-earner (69 minutes), or one-earner (84 minutes) families. The time spent by two-earners was also significantly less than the time spent by one-earners. These differences amounted to a discrepancy of 34 minutes between homemakers in single parent and one-earner families and 15 minutes between homemakers in one-earner and two-earner families. The covariates, age of the youngest child and family income, did not significantly effect the time spent by the homemaker on food preparation. Results are in agreement with the findings of previous researchers comparing single parent to two parent families, or employed to nonemployed homemakers (Goebel and Hennon 1983; Nickols and Fox 1983; Ortiz, MacDonald, Ackerman, and Goebel, 1981; Peters and Haldeman 1987; Sanik and Mauldin 1987; Walker and Woods 1976).

No significant differences were found between spouses in one-earner and two-earner families in time spent on food preparation, and the covariates did not significantly effect the spouse's time. The average increase in the time spent by the spouse in the two-earner household was only one minute per day compared to the time spent by the spouse in a one-earner household. Other researchers also have found no significant differences in the amount of time spouses spent on food preparation between households with employed compared to nonemployed homemakers (Berk 1985, Goverman 1985; Perlmutter and Wampler 1985).

There were no significant differences in the amount of time children spend on food preparation among single parent, two-earner, and one-earner households. Age of the youngest child, however, significantly and positively related to the time that both the oldest child ($r=.34$) and the youngest child ($r=.20$) spent on food preparation. This means that children spend more time on food preparation as the youngest child grows older. These results are also in agreement with previous researchers (Cogle and Tasker 1982; Geerken and Gove 1983; Peters and Haldeman 1987; Peterson 1979; Sanik and Mauldin 1987).

The total family time spent on food preparation was found to be significantly different among all three family types. These differences reflect the significant results obtained for the homemakers' time. The covariates were not found to significantly effect total household time spent on food preparation. Homemakers contributed an average of 79.44% in all three household types to total meal preparation time (Table 1). Single parent households spent the least amount of time on food preparation (64 minutes), when compared to two-earner households (93 minutes), and one-earner households (102 minutes).

TABLE 1. Mean Number of Minutes per Day Spent on Food Preparation by Family Members in Single Parent (N=81), Two-Earner (N=68), and One-Earner (N=127) Families

Family Member	Family Type			
	Single Parent (N=82)[1]	Two-Earner (N=71)[1]	One-Earner (N=125)[1]	Total (N=277)[1]
Homemaker	50	69	83	70
(percent)	(78.2)	(74.7)	(82.4)	(79.4)
Spouse	0	11	10	7
(percent)		(11.4)	(9.8)	(8.2)
Youngest Child	6	7	3	5
(percent)	(8.7)	(7.9)	(2.8)	(5.4)
Oldest Child	8	6	5	6
(percent)	(13.1)	(5.9)	(5.0)	(7.0)
Total Time	64	93	101	88
(percent)	(100)	(100)	(100)	(100)

(1) Data are weighted, therefore the total N vary slightly from the actual number of respondents.

Techniques Used to Reduce Level of Involvement

Significant differences were found, using analyses of variance, among the three family types for each of the four techniques used to reduce level of involvement in food preparation. These techniques were identified as: (a) Reducing the number of meals prepared at home, (b) reducing the total number of meals consumed by household members, (c) reducing the number of items served per meal, and (d) reducing the number of times household members shop for food.

Post hoc comparisons using Tukey's HSD revealed the source of the differences among the family types.

1. The number of meals prepared per day were significantly lower (2.4) for single parent than for two-earner (2.9) or one-earner (3.2) families. Differences between two-earners and one-earners were also significant.

2. The number of total meals consumed per day were significantly lower (3.5) for single parents than for two-earners (4.0) or one-earners (4.0). The differences between two-earners and one-earners were not significant.

3. The average number of items served per meal were significantly lower in single parents (3.2) compared to two-earners (3.6). The number of items served by one-earners (3.4) were not significantly different from the other two family types.

4. The number of times family members shopped for food per week were significantly lower in single parent (1.9) than in two-earner (2.6) families. The one-earner shopped an average of 2.0 times per week, which was not significanly different from the other two family types.

Planning Ahead Strategies

Analyses of variance were used to compare differences among single parent, two-earner, and one-earner families in strategies used that require planning ahead such as; (a) freezing food and (b) preparing food ahead for future use. No significant differences were found among the three family types. Homemakers did not prepare food for future use differently among the three family types. Perhaps the time constraints on the single parents and homemakers that are employed prohibit the additional planning time required for preparing and freezing food for future use.

Use of Market Substitutes

Analyses of variance were used to determine differences among single parent, two-earner and one-earner families in the use of; (a) convenience foods, (b) time saving consumer durables , and (c) disposables. Analyses of covariance were used to determine differences among the three family types in eating meals away from home (including where the meals were eaten and what the meals cost). Age of the youngest child and family income were treated as covariates based on results of previous research.

No significant differences were found among the three family types in use of convenience foods and disposables. These results agree with the findings of Nickols and Fox (1983) that employed and nonemployed homemakers did not differ in use of convenience foods. However Nickols and Fox found a significant difference between employed and nonemployed homemakers in use of disposables. Significant differences among single parent, two-earner, and one-earner families were found for ownership of consumer durables and eating at fast food restaurants. Post hoc comparison using Tukey's HSD revealed that single parent families owned significantly fewer consumer durables (2.3) than the two-earner (3.7) or one-earner (3.1) families. The difference between two-earners and one-earners was also significant (Table 2). Previous researchers did not find a significant difference between ownership of consumer durables and employment of the homemaker but no studies were found comparing single parent and two parent families (Nickols and Fox 1983, Reilly 1982). Results obtained for number of meals consumed away from home were not significant, when age of the youngest child and family income were controlled. However, both covariates were found to be significantly and positively related to the number of meals eaten away from home. Pearson correlations between the number of meals eaten away from home and the age of the youngest child (r=.25) or family income (r=.17), showed that as children grow older and income rises, families eat away from home more often.

Further analyses of where the three family types ate their meals and what these meals cost revealed that single parents used fast food restaurants significantly more than the other family types, but there were no significant differences among the three family types in the amount of money spent on meals away from home. The average total expenditure per day for meals away from home was $3.20 for single parents families, $3.64 for two-earner families , and $3.32 for one-earner families. It is interesting to note that single parent families spent the highest average amount per meal when they ate out, $3.13. For two-earner families, the average cost per meal was $2.84 and for one-earners the average cost was $2.59. One explanation of these findings is that two-earner families ate out more often than single parent families but spent fewer dollars per meal because they relied much more on meals at social gatherings and friends and relatives homes. Other researchers have found that households with employed homemakers ate more meals away from home compared to households with nonemployed homemakers however no mention was made of where the meals were eaten or what they cost (Nickols and Fox 1983; Ortiz, MacDonald, Ackerman, and Goebel, 1981; Trotter 1980).

TABLE 2. Type and Percentage of Consumer Durables Owned by Single Parent, Two-Earner, and One-Earner Families

Type of Item	Family Type Single Parent % N=81	 Two-Earner % N=68	 One-Earner % N=127
Refrigerator 1**	55.6	89.7	79.5
Refrigerator 2	3.7	8.8	4.7
Oven	18.5	22.1	28.3
Freezer**	33.3	72.1	59.1
Microwave Oven	9.9	23.5	16.5
Dishwasher**	48.1	82.4	63.8
Garbage Disposer	56.8	60.3	56.7
Trash Compactor	1.2	7.4	4.7

Note. Only refrigerators that were frost free, and ovens that were self or continuous cleaning were counted.
** p<.001

Discussion

Several possible strategies were identified that could be used to save time in food preparation in single parent, two-earner, and one-earner households (Table 3). In single parent families the homemaker and other family members spent less time in food preparation, prepared less items per meal, shopped fewer times for food, owned fewer consumer durables and frequented fast food establishments more than the other two family types. In two-earner households the homemakers shopped more frequently for food, prepared more items per meal, and consumed more meals per day than single parent or one-earner families. The one-earner households spent the most time on food preparation both in terms of the homemaker's time and the total family time. They also prepared more meals at home than single parents or two-earners.

TABLE 3. Summary of Significant Results of the Study: Strategies Used to Save Time on Food Preparation by Single Parent (N=81), Two-Earner (N=68), and One-Earner (N=127) Families

Type of Strategy	Family type Single Parent N=82[1] Mean	 Two-Earner N=71[1] Mean	 One-Earner N=125[1] Mean
Homemaker's Time (in minutes) on Food Preparation***	50	69	84
Total Household Time (in minutes) on Food Preparation***	64	93	102
Number of Meals Prepared at Home per Day***	2.4	2.9	3.2
Total Number of Meals Consumed per Day**	3.5	4.0	4.0
Number of Items Prepared per Meal per Day*	3.2	3.6	3.4
Number of Times Shopped for Food per Week*	1.9	2.6	2.0
Number of Consumer Durables Owned***	2.3	3.7	3.1
Number of Times Frequented Fast Food Establishment per Day*	.14	.00	.09

(1) Data are weighted, therefore the total N vary slightly from the actual number of respondents.

* p<.05
** p<.01
*** p<.001

Homemakers take primary responsibility for food preparation regardless of family type. In two parent families, the spouse contributes very little time whether the homemaker is employed or not. Children help some but not enough that the homemaker is relieved to any great extent. Homemakers respond to the time pressures by cutting back on their own time spent on food preparation, especially when the homemaker is a single parent.

Single parents manage these cutbacks in time spent on food preparation, in part, by preparing fewer meals at home, serving fewer items per meal, shopping less for food, and using fast food establishments. Further research is needed to assess whether these cutbacks have an effect on the nutritional adequacy of the diet of single parent families compared to other family types.

Two-earner families prepare more items per meal, consume more meals per day, and shop more often for food than the other two family types. It was expected that one-earner households, not two-earners, would prepare the most items per meal, since they have the least constraints on their time. Perhaps two-earner households entertain more than single parent or one-earner households, which would explain why they would be more inclined to prepare a larger number of items per meal. It also would explain why social gatherings and eating at friends and relatives are a more important source of meals away from home for two-earner families than the other family types. There may be more social exchange and grantsmanship in the two-earner lifestyle or it might be that two-earners have more opportunity for social exchanges because of their interactions with co-workers at the place of employment. Grantsmanship resources in further studies would facilitate identification of a possible different lifestyle for two-earner families. Expenditures for entertainment would be an important variable to examine in future studies. Results from this research suggest that differences in two-earner families may be less a matter of income and resources than a matter of lifestyle.

As expected, one-earner families spent more time in meal preparation and prepared more meals at home than other families. Apparently, the meals that were prepared are not necessarily elaborate, because there were fewer number of items prepared than in two-earner families.

Results of this research revealed that families did not prepare food ahead for future use, did not use disposables, or use convenience foods differently among the three family types. One reason that convenience foods are not used differently, might be because of the way the data were collected. Identification of convenience foods for this study relied on the homemaker's perception of the ease of the meal's preparation. Use of specific convenience products would give a better way to identify convenience food use in the future.

Use of other strategies that were not included in this study that could effect the time the homemaker spends on food preparation might be included in further research. Such strategies could include using leftovers for subsequent meals, or use of market substitutes not available at the time of this research (take-out foods and home delivery) which can be strategies the homemaker may use today in saving food preparation time.

The impact of psycho-social variables on food preparation techniques needs to be addressed. Homemaker's nutritional beliefs, national origin, and social status effect the type of meals the homemaker prepares.

Another area of interest, not available in this data, would be to identify the types of meals prepared in single parent and two parent households by the children. Are children in single parent households preparing their main meals while children in two parent households prepare only snacks, or help the homemaker prepare the main meal?

Results obtained from this research can be of benefit to the food industry, social service agencies, employers, educators, the Government and the general public. As families adapt to changes in the economy with more varied lifestyles, the homemakers can use findings from this research to evaluate their own situation and needs, which hopefully will narrow the discrepancy between the ideal sharing of household work by all members, and the actual social practices in families.

There is a great need for government policies to be developed that address the needs of single parent and two-earner families. Public policies that need to be adopted are those dealing with affirmative action programs, comparable worth legislation, parental leave legislation, and benefits for part time workers. A ten year follow up study on time use in single parent families is being conducted in Utah as a part of U.S.D.A. regional research project SD-206. This study has provided important baseline data that will be useful to researchers as they continue to build a knowledge base regarding how single parent, two-earner, and one-earner families use time to improve their quality of life.

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LIVING RESOURCEFULLY--IT'S YOUR DECISION: AN INTERDISCIPLINARY EXTENSION EDUCATIONAL PROGRAM

Katey Walker[1]

Abstract

The Living Resourcefully Extension educational program is a new long-term coordinated effort to help individuals and families effectively manage their resources to maximize their satisfaction and meet their needs and goals. Resource allocation choices and consumer purchase decisions based on individual and family values and attitudes are the key concepts in the curriculum.

The paper describes the development and accomplishments of this new program approach, which (1) integrates several subject matter fields, (2) fosters team work among Extension personnel, (3) illustrates an effective method of marketing an educational program to both new and traditional audiences, and (4) documents successful accomplishments. The topics discussed are relevant to college courses as well as Extension programs.

Increased levels of economic and emotional stress were experienced by many families during the mid-eighties. Many issues confronting families were complex, interrelated, and difficult to manage. In a recent paper on "Social Changes Faced by Families," family economics and management educators were reminded that "interdisciplinary models are not elegant" (Keefe and Paolucci 1981). Families' problems are multidimensional, which often make neat theoretical models different to apply. Yet, effective educational programs today must address interrelated choices. Decision making, the selecting of one action from a number of courses of action or the choosing of no action, is the crux of the management process (Gross and Crandall 1963). When management educators work with educators from other fields of study, time must be devoted to building group cooperation and understanding the terminology and perspectives of other disciplines.

Program Rationale

Families and individuals are continually faced with the problem of stretching their resources to provide for everyday necessities, set and accomplish long range goals and improve the quality of their lives. Resource management problems are not isolated, individual problems, amenable to simple solutions. Rather, decision-making in these areas involves a complex set of interrelated choices. Changes in both lifestyles and in the family life cycle are accompanied by changes in needs, wants and goals and in the resources available to meet these changing situations. The ability to manage well increases the number of needs and wants that can be achieved with a given set of resources.

While general economic recovery is currently underway, with improved economic growth, moderate inflation rates and high employment levels, many areas are still faced with high interest rates, severe economic problems in the oil producing sector, and continued concern over farming and other rural businesses. Both dual earner and single parent families are increasing in number. Time and energy are particularly scarce resources for these people.

Many people have difficulty in clarifying goals and setting priorities for the use of money and other resources. Others have some illogical or inappropriate behavior when dealing with money (relative to their goals). These difficulties are accentuated by loss of income from unemployment, or business or farm failures, family displacement, or health problems. "Managing on a reduced income" was the top priority critical concern in the state's needs assessment survey (Corbin 1986). Inflated housing and furnishing costs have placed budget constraints on many families. Frequently most of the housing portion of the budget is allocated to rent or mortgage payments, with very little remaining for furnishings. Clutter control and effective use of storage space are also common needs. Planning food expenditures to maintain adequate nutrition and family satisfaction within time, energy, and money constraints is another on-going management problem. The clothing budget is a challenge to manage effectively because other household expenditures are often taken from dollars planned for family clothing.

Farm families, low income families and other clientele groups have special problems in managing their resources. The increasing complexity of the market place for both goods and services increases the difficulty of making rational decisions.

Issue-based Programming

The mission of the Extension service since its beginning has been to provide timely information to strengthen the social, economic, and environmental well being of families, youth, communities and agricultural enterprises (Extension Committee on Organization and Public Policy 1987). As a nonformal educational system, the Cooperative Extension Service is constantly challenged to be dynamic, contemporary, progressive, and visionary. Formal educational institutions also strive to provide the best possible education to equip their students to meet the challenges of the future. In 1986-87, Extension initiated a process and plan for the future, focusing on vital issues critical to the economic, social and environmental progress of Americans (U.S. Department of Agriculture 1988). After identification of eight national priority initiatives, Extension began setting up interdisciplinary teams to work across the traditional academic subject matter areas in order to concentrate its educational efforts on selected needs and key issues.

Concurrent with the national planning process, a group of state Extension specialists in management, consumer education, and specific subject matters (clothing, textiles, interior design, housing, and foods) began development of the Living Resourcefully program, an issue-based program to meet the needs of families throughout the state. This statewide emphasis provided an interdisciplinary, research-based program to help people enhance their ability to obtain and maintain family and economic well-being.

The program is designed to help families identify needs, make decisions, and utilize resources to improve their quality of living. Programs include information on managing human and financial resources; providing nutritious, safe, and attractive meals; planning and caring for clothing and household textiles; improving personal and community relationships; and providing a safe and attractive home environment.

Purpose and Conceptual Framework

The primary purpose of the Living Resourcefully program is to help clientele make choices suited to their unique circumstances, rather than attempting to follow an out-of-date "urban family budget," set aside an exact percentage of income as savings, or depend on brand names as guidelines for consumer purchases. Many families needed to learn -- or relearn -- decision-making skills and other management principles in order to cope with changing personal and financial circumstances.

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The general decision model or framework for the program is based on the following concepts:

1. *Social or human* decisions involve setting goals and priorities that determine the general roles of individuals and relationships among individuals within a group.

2. *Economic or allocation* decisions involve the availability of resources and ways of allocating or distributing these resources among various goals.

3. *Technical or "what, when, how, who, why"* decisions involve allocating specific amounts of given resources to most efficiently attain a single goal, accomplish a specific task or make a specific consumer purchase.

4. *Coordination and interaction* decisions relate to social, economic, and technical decisions. They deal with communication within the family and with the larger community, the kinds of information needed to make other decisions, criteria for evaluating decisions and ways of motivating family members to carry out their roles (Nickell, Smith and Tucker 1976).

Program Goals

The overall program goals are process goals, such as assisting individuals in identifying values, setting for immediate and long-term goals, prioritizing the goals and developing or allocating resources to meet them. The process approach to resource management applies to persons of any age, any income level, any lifestyle and any family size or stage in the life cycle and facilitates adjusting to changes from both external and internal sources. The general management process (planning, implementing, coordinating, and evaluating) is central to enabling individuals to improve their satisfaction with choices within their resource constraints.

Individuals and families participating in the program will:

- Use the decision-making process as a means of using their resources most effectively as a method of adapting to change and a strategy to achieve both short term and long range goals.

- Understand the influence of their values in determining goals and making choices related to the allocation of their resources.

- Identify their available resources and plan expenditures so they can live within these resources an have adequate protection against financial crises.

- Recognize that changing lifestyles and stages of family development affect the use of their resources and resource availability influences lifestyles and potentials for choice.

- Acquire and use reliable information and analyze options when making resource management and consumer purchase decisions.

- Develop knowledge and skills to supplement money income or to increase home production of goods and services.

Specific objectives developed for participants in each individual program or lesson series are illustrated by the following examples.

- Identify a spending behavior they wish to change, devise a plan to accomplish this change, and make progress toward changing the behavior.

- Use information to save clothing dollars by analyzing their wardrobes and making clothing acquisitions based on individual and family needs.

- Use clothing construction skills to save at least $20 each by constructing at least one garment.

- Increase decision-making and buymanship skills when acquiring clothing; save money by purchasing durable clothing with long wear life; use adequate stain removal techniques on clothing to avoid buying replacements; increase clothing wear life with suitable laundry and care procedures.

- Become aware of multi-use furnishings and low-cost furnishings options.

- Develop a sense of imagination and find creative uses for old and discarded items and develop some do-it-yourself skills necessary to refurbish present furnishings.

- Make better informed decisions about the use of credit in their own situations and understand the costs and benefits of credit use.

Developing the Program: The Crucial Role of Team Work

Specialists prepared lesson plans, publications, and related materials on goals and decisions; time management; financial management; selection and care of clothing, housing choices; textiles and home furnishings; food buying and related choices; and commodity foods use. In later stages of the progress, specialists in agricultural economics and the 4-H/Youth department participated in preparation of training materials. Resident faculty in human development also contributed their expertise.

For interdisciplinary programming to work, recognition that issues are more important than subject areas is critical. Extension personnel (administrators, specialists, county agents, even volunteers) must be willing to work as a team, rather than concerning themselves with "protecting their turf." This is a major change for many, since Extension volunteer and advisory groups, professional rewards (tenure/promotion/salary increases), and most programs are traditionally structured on subject areas or academic department lines (Flinchbaugh and Ward 1988).

The Living Resourcefully program has demonstrated that developing and delivering an integrated program is possible...successful...and satisfying...to both professionals and program participants. A key ingredient in the successful development of an issue based program is trust. Although one person is needed to serve as contact person/facilitator, a concerted effort is made to give "equal credit for equal work", and to consistently recognize the efforts of the whole team.

Similarly, group members must each carry out their responsibilities and make their contributions. This was facilitated by devising the state training programs to include both the overviews on management and decision-making, values, and goals, and specific applications to subject matter areas. The conceptual framework for the initial training emphasized economic and technical decision-making. The following year, human or social decisions, with an emphasis on balancing time, money and other resources, were added to additional sessions on financial and purchase decisions, with tradeoffs among choices as the underlying theme.

An interdisciplinary program must be satisfying to professional as well as clientele participants. Care was taken to minimize the amount of time needed in meetings and discussion and scheduling. Within the overall conceptual framework, each specialist handled her own training session and specific subject matter application. Personal styles of teaching and preparing materials were maintained. This facilitated the academic recognition problem since each one would identify what she had done herself and what she had contributed to the total team effort. Congenial personalities and dedication to a common goal also facilitated development of the program. Productivity was increased by exchanges of ideas about subject matter and teaching techniques.

Content and Delivery Methods

Educational modules were developed in response to the state needs assessment results and county agent requests. The curriculum includes lessons (or lesson series) on topics such as:

- Building Human Capital -- Using Time, Energy and Skills
- Family Budgeting
- Getting Household Records in Order
- Becoming a Competent Consumer
- Current Issues in Consumer Credit
- Care of Clothing
- Care of Home Furnishing Fabrics
- Do-it-Yourself Wallpaper and Furniture Refinishing
- Clutter Organization
- Using Commodity Foods
- Super Shopper Connection (4-H and Youth Consumer Education)

A variety of program delivery methods and support materials were developed. Some were targeted toward group meetings, others for individual or learn-at-home use. Examples include:

- Mail out series
- Video tapes, slide sets, and other audiovisuals
- Group teaching lessons
- Resource packets
- Newsletters
- Mass media information for radio, television, or newspaper columns and articles

County extension agents participated in the initial series of area trainings on Living Resourcefully. It's Your Decision and subsequent specific subject matter trainings. Agents utilized the program materials for direct teaching, leader training, and mass media. The Super Shopper Connection and other consumer education information was initiated for 4-H and youth programs. The following year, the same theme was continued with training on Living Resourcefully: Time/Money Trade-Offs.

Another facet of the move toward issue-based educational programs is the need to target specific audiences rather than using a "one size fits all" approach. Extension educators must deliver more information using more types of media to diverse audiences with less money. Audiences also were varied, including:

- Busy people -- working families
- Young families or singles
- Rural families
- Low income persons
- Youth
- Retired persons
- General public

Targeting specific audiences for specific programs, lessons, or mass media messages increases the effectiveness and potential impact to bring about clientele behavior changes (Colorado State University Cooperative Extension Service and the United States Department of Agriculture 1985). County agents report success and enthusiasm about programming with the Living Resourcefully theme. Materials are designed so they can select specific lessons. The emphasis on individual decision-making helps them deal with clientele who want the non-existent answer to complex questions.

Marketing the Program: Publicity and Accomplishments

In addition to teaching decision-making, an important purpose is the "marketing" of this educational program to both traditional Extension audiences and other potential clientele. Evaluating program impacts and documenting accomplishments, an on-going need in Extension work, are also facilitated, which in turn makes marketing easier.

A brochure was developed to publicize the availability of Extension programs in this Living Resourcefully area to potential participants as well as to decision makers and persons unfamiliar with the Extension educational system. The program topics were updated two years later to illustrate new offerings available and emphasize the time/money tradeoff concept. Introducing "one shot" presentations as part of the total Living Resourcefully effort also enhanced the image of Extension Home economics.

From the accountability perspective, more benefit is gained by presenting program results in a unified way rather than as summaries of many fragmented lessons which alone seem trivial and not worth the support of tax dollars.

Outcomes

Combinations of qualitative and quantitative evaluative procedures were used to assess program results at several levels:

- changes in knowledge, skills, and attitudes;
- changes in practice (varying with topics studied);
- projects accomplished, dollars saved or resources extended and goals achieved.

Some examples of measurable results are described below.

The "Coping with Consumer Problems, Deceptions, and Frauds" program addressed old and new schemes, particularly those targeted to vulnerable audiences in the rural sector. Leaders' guides and publications on avoiding common cons, money making schemes, and handling consumer complaints were distributed. Over 2,500 individuals have participated in the lessons. Results of a questionnaire sent to a sample of homemakers indicated that 92% had become more aware of fraudulent acts, 91% learned new ways to avoid being deceived, and 95% planned to teach others about things they had learned. The greatest increase in knowledge was about proper authorities to contact in cases of fraud (97% of the respondents).

The program "Building Human Capital" helped individuals and families identify and use their human resources (knowledge, skills, abilities, attitudes, time and personal energy). A sample of approximately 300 people indicated that 57% found the lesson was very useful; over 80% learned new information, while 62% responded that they had learned to recognize or identify more of their own human resources. Some changes to use more of their human resources or to use them in a more effective way were made by 42% of the sample, and 64% were planning us use some of their new information during the next year.

Two new information series (the Young Families newsletter and the Managing a Money Crunch packet) were developed to meet requests for written materials for mass media, newsletter, and simple lessons, particularly designed for county residents who were reluctant to attend group meetings or ask for assistance in person. As a result of these programs, families and individuals improved their ability to set their own goals and make choices appropriate for their unique situations. Awareness of human resources and the importance of motivation and attitude in resource management were also enhanced. Resources were extended by careful shopping and avoidance of deceptions and frauds.

In the "Clothing Acquisition and Care" programs, knowledge was gained and decision-making improved by 30,091 persons; 26,176 learned new skills; and income extended amounted to $752,275. In the Clothing Master Leader program, 3,212 leaders were trained; knowledge was gained and skills were learned by 36,957 persons; and income extended amounted to $64,725.

"Getting Your Household in Order", a 3-part learn-at-home course focusing on organizing household records and inventorying household possessions/records; survey results indicated that 2,893 individuals improved their attitudes toward getting their records in order and 2,710 persons changed their behavior. One individual reported finding a forgotten $1,000 savings bond as she sorted through her papers.

Conclusion

Developing effective educational programs - whether formal or informal - is a difficult task in complex areas such as family resource management and consumer purchasing. Teamwork, marketing and cooperation can produce an integrated subject matter program to meet family needs.

The Living Resourcefully program has provided training to over 6,000 leaders. Over 95,000 individuals have gained new knowledge and skills. The interdisciplinary approach to family and economic well-being has been highly successful and will be expanded over the next four years.

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UTAH'S CHILD SUPPORT GUIDELINES

Judith M. Billings

The Utah Child Support Task Force was created by the Judicial Council as a result of a recommendation from the Board of District Judges. The Task Force was asked to examine present procedures for establishing child support awards and to make recommendations for the implementation of child support guidelines for use in Utah's courts and administrative agencies involved in setting child support. The Task Force's inquiry was limited to the setting of child support and thus necessarily excluded other important areas of family law including custody and visitation.

Members of the task force were appointed by Utah Supreme Court Chief Justice Gordon Hall and included trial judges, domestic relations commissioners, lawyers, members of the legislature, recovery services personnel, family law professors, economists, and representatives of public interest groups. After its formation in the spring of 1987 the Task Force met regularly and solicited input from a wide range of sources. The task force heard testimony from many parents at a public hearing in Salt Lake City and from invited experts including trial judges and family law lawyers. The task force further conducted a detailed survey of district court judges and family law lawyers as to the propriety of having uniform child support guidelines and the characteristics of such guidelines. One hundred percent of the judges and lawyers responding recommended the adoption of uniform child support guidelines based upon the cost of raising children.

The Task Force spent many hours reviewing child support guidelines which have been adopted in other states. Presently forty-seven of our sister states have adopted uniform child support guidelines. The committee also read extensive scholarly materials on the subject.

As part of its work, the committee reviewed many economic studies on the status of children in divorced families. A 1985 national study estimated that 26.6 billion dollars in child support would have been due in 1984 if awards were based on either of two existing, well accepted guidelines. By comparison a census bureau study indicated that only 10.1 billion in child support was reported to be due and only 7.1 billion was actually collected. These figures demonstrate that there was a compliance gap of 3 billion but more important an adequacy gap of more than 15 billion. Further, a recent U. S. Census Bureau study reported the mean child support order in 1983 was $191.00 per month for 1.7 children. One authoritative study indicated an order of $191.00 for 1.7 children is equivalent to only 25% of the average expenditures on children in a middle income household. This average child support award is less than the $273.00 required under 1984 federal guidelines to maintain the same 1.7 children at poverty level.

The committee also heard extensive testimony from parents paying and receiving child support about unnecessary and unfair variation in awards. The committee was persuaded that the obligors perception of inequitable treatment may contribute to existing compliance problems.

Finally, the committee reviewed materials which indicated that the experience of states with guidelines has shown that guidelines can improve the efficiency of adjudication. Guidelines facilitate voluntary settlements and reduce court or administrative agency time required to resolve the cases that are contested.

Based upon its review of the literature the committee was persuaded that there was a need for guidelines. Generally the deficiencies in the traditional case by case method can be summarized as 1) a shortfall in the adequacy of awards when compared to the true costs of rearing children, 2) inconsistent orders resulting in inequitable treatment of parties in similarly situated cases, and 3) inefficient adjudication of child support awards.

After determining that a uniform child support guideline should be implemented in Utah, the Task Force focused on the purpose of such guidelines. The committee determined that we wished to formulate guidelines which would lead to predictable levels of child support, be simple to apply, and reflect the duty of both parents to support their children commensurate with their ability. We further hoped to protect children as much as possible from the adverse economic consequences of family breakup of nonformation.

The committee formulated proposed child support guidelines and implementing schedules and presented them to the Board of District Judges and the Judicial Council for preliminary approval subject to public hearings in March 1988. The Guidelines were then distributed through local bar associations and public agencies throughout the state. Task Force members attended the following public hearings in order to receive comment and critique of the Guidelines.

March 31 -- Price .... 5:30 - 7:30 p.m.
April 4 --- Brigham City ..... 5:30 - 7:30 p.m.
April 6 --- Orem .... 5:30 - 7:30 p.m.
April 13 -- St. George .... 5:30 - 7:30 p.m.
April 14 -- Richfield .... 5:30 - 7:30 p.m.
April 18 -- Salt Lake City ... 5:30 - 10:00 p.m.

The public interest demonstrated a need for the judiciary to listen to the public in this important area of family law. The Task Force heard comments from judges, lawyers and custodial and non-custodial parents. Much of the testimony focused on related issues such as custody, denial of visitation, updating of awards and problems with collection. The Task Force also requested and received written comment. We received and reviewed more than 200 letters from interested individuals and organizations.

As a result of the public comment, the Task Force substantially revised the Proposed Guidelines. The major changes included 1) The Guidelines would not apply to existing orders, 2) future second families of non-custodial parents would be considered in any modification of a child support ordered set under the Guidelines, 3) the amount of child support provided in the schedules was reduced from 5-20% depending on income levels with the greatest reduction at the high income level, 4) the Guidelines do not apply in joint custody cases.

The Task Force presented its final report to the Utah Judicial Council on June 27, 1988 at a public meeting. The Task Force not only presented the Guidelines, but also made recommendations based upon its year long study of related family law areas which needed study. These included: 1) perceived gender bias in the awarding of child custody, 2) enforcement of visitation, 3) collection of child support, 4) use of child support payments, 5) access to the court system, and 6) updating child support awards.

I have never served with a more public spirited or harder working group of citizens.

Groups which endorsed the Guidelines and encouraged their implementation included the Utah State Bar, the Board of District Judges, the Utah Court of Appeals, the Legal Aid Society, Utah's Governor's Commission on the Status of Women, Utah Psychological Association, Women Lawyers of Utah, Phoenix Institute and Utah Children. The Guidelines were adopted by the Judicial Council in June 1988 with slight modification to be effective October 1, 1988.

As a result of the public interest generated by the public meetings, the Interim Judiciary Committee of the Legislature began studying the Judicial Council's action at its July and August 1988 meetings. As a result this committee requested the Judicial Council to either delay implementation of the Guidelines until the Legislature could consider the matter at the next legislative session, or to make the guidelines advisory rather than presumptive. The Judicial Council considered this request in August 1988 and voted to implement the Guidelines effective November 1, 1988 but to change the Guidelines from presumptive to advisory. However, worksheets calculating the appropriate amount of child support under the Guidelines must still be presented to the judge in every case.

The Guidelines generally do the following:

1. The Guidelines apply to all cases including stipulated and default matters.

2. The scheduled child support amount is based upon actual economic data as to what it costs to raise a child in a poor, middle and upper income family. This basic amount is then divided between both custodial and non-custodial parent so that each contributes to the required amount based upon their percentage of income.

3. Gross income is used but the schedules have been adjusted for average federal-state tax. The Guidelines also allow subtraction of previously ordered and paid child support and alimony. Historical income is to be considered if possible, requiring one year of W-2's and two years of tax returns. The guidelines also define what gross income is in a self-employment situation. The guidelines only apply up to the amount of $10,000 of income per month.

4. The guidelines provide different levels of support for different ages of children (0-6) (7-15) (16-18).

5. There is an add-on above basic child support needs for child care expenses and a credit is given for medical-dental insurance premiums paid.

6. There is special provision for adjustment of awards in split custody and extended visitation situations.

The actual Utah Child Support Guidelines are in Appendix A. Implementing forms, schedules and worksheets will be printed in Code and will be available in the clerks office at all district courts. The State Court Administrators Office will conduct educational seminars on the Child Support Guidelines for bar members in October or November 1988.

The Judicial Council established a standing committee to monitor and review the implementation of the Guidelines including three district court judges, one domestic relations commissioner, one Court of Appeals judge, one attorney appointed by the Utah State Bar specializing in domestic law, one representative of Recovery Services, two non-lawyer citizen representatives, one to represent custodial and one to represent non-custodial parents. This committee will collect data to see if judges are following the Guidelines and if not the reasons for deviation.

Hopefully the result of this effort will be the setting of more uniform and equitable child support orders in the courts of Utah.

APPENDIX A

CHILD SUPPORT GUIDELINES

OVERVIEW -- DETERMINATION OF CHILD SUPPORT

1. Guidelines Advisory: The guidelines are advisory to the court. Final orders in all cases shall be made at the discretion of the court based upon the facts of the individual case.

2. Worksheets Mandatory: Two worksheets and a child support schedule are included in the guidelines packet. The worksheets represent

sole custody and split custody situations. THE APPLICABLE WORKSHEETS MUST BE COMPLETED IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED HEREIN AND SUBMITTED TO THE COURT WITH SUPPORTING FINANCIAL VERIFICATION. Child support is determined by calculating (a) the parties' available income; (b) the child support need; (c) the child support obligation. The schedule lists amounts of combined adjusted gross income.

3. Application: The guidelines apply to all cases, not just those that are litigated, including divorce, separation, and paternity. They apply regardless of the gender of the custodial parent.

4. Application to Existing Orders: THE ADOPTION OF THESE GUIDELINES AND ANY CONSEQUENT IMPACT ON EXISTING CHILD SUPPORT ORDERS DOES NOT CONSTITUTE A SUBSTANTIAL CHANGE OF CIRCUMSTANCES TO INDEPENDENTLY ALLOW MODIFICATION OF AN EXISTING ORDER. Petitions for modification of existing child support orders in place on October 30, 1988 will be considered on a case-by-case basis. Courts have continuing jurisdiction to modify child support orders under circumstances amply described by present case law to advance the welfare of the child when there is a material change in circumstances. In determining requested modifications of support orders entered prior to the effective date of the guidelines, the court will consider the totality of the present circumstances of the parties and avoid modifications which would work undue hardship on the parties or any children presently dependent thereon.

5. Second Family Obligations: Natural born or adopted children from a second family of the noncustodial parent whose child support obligation was set after the adoption of these guidelines will not be considered to lower an existing child support award. However, in any modification proceeding brought by the custodial parent of the first family to raise child support, all natural born and adopted children of the noncustodial parent will be considered in determining whether the award should be increased. In applying the guidelines, the court may use the schedule reflecting the total number of natural and adopted children the noncustodial parent is supporting.

6. Taxes and Social Security: Mandatory state and federal taxes and social security deductions have been used in setting award amounts using estimates of after tax income compiled by the U. S. Bureau of the Census. There is no separate computation of these amounts since the deductions are built into the basic child support need figures used in the schedules.

7. Tax Exemption: The basic child support need figures were further adjusted reflecting the assumption that the custodial parent would receive the tax exemptions for all children. If the custodial parent relinquishes the tax exemptions, this could be grounds for an adjustment in the basic award.

8. Default: In a default hearing, the moving party is required to bring to court a completed child support worksheet, financial verification and an Affidavit indicating either: 1) that the amount of child support requested meets at least the minimum level of support required under the guidelines, or 2) that the amount of child support requested does not meet at least the minimum level of support required under the guidelines. If the required documentation of income is not available, the court may accept a verified representation of the defaulting party's income by the moving party based on the best evidence available. The evidence shall be in affidavit form and may only be received into evidence after a copy has been provided to the defaulting party in accordance with Utah Rules of Civil Procedure.

9. Uncontested Hearings: In an uncontested hearing, the moving party is required to come to court with a completed child support worksheet, financial verification and an Affidavit indicating either: 1) that the amount of child support agreed upon meets at least the minimum level of support required under the guidelines, or 2) that the amount of child support agreed upon does not meet at least the minimum level of support required under the guidelines.

10. Joint Physical Custody: Joint physical custody, because of its factual complexities, is better handled on a case by case method. The sole custody worksheet should generally be used unless the children spend 35% of overnights with the secondary custodial parent. Evidence indicates that it costs more to rear children under a joint custody arrangement. Generally an amount equal to 50 percent of the support award, as determined by using the guidelines, should be added to determine the total costs of support necessary in such situations. This total cost would then be divided between the parents based upon the percentage of time the child spends in each household.

DOES YOUR RESEARCH MAKE A DIFFERENCE: APPLICATIONS OF INDICATORS OF IMPACTS

Carole J. Makela, Ph.D, CHE[1] and Suzanne M. Tucker, Ed.D., CHE[2]
Colorado State University

A recent publication Home Economics Research Impacts Framework for Evaluation developed by the North Central Regional Committee on Home Economics Research Evaluation needs our attention. In addition to background on measuring research impacts, possible indicators of impacts of research were identified in four research areas. Two of these areas, family economic stability and security, and energy and environment, have been topics of WRHMFEE reported research.

The authors' purposes in this presentation were to 1) develop awareness of a recently published work to evaluate the impact of home economics research, 2) explore interest of attendees in analysis of impacts of research reported in WRHMFEE annual proceedings, and 3) present a draft instrument for researcher(s) analysis of research productivity.

Our proposal is that the draft instrument (Figure 1) would guide researchers in the 1) preparation of proposals, 2) identification and plan for dissemination -- to both media (i.e. journals, Extension publications, etc.) and target groups (government agencies, mass media, educators, etc.) -- and 3) assessment of the specific impacts of their research and that of others.

We suggest that researchers use the form in the planning of research projects. This should help in more effectively developing the research design, data collection and analysis, and the dissemination to optimize the impact of the research. It may also assist in the identification of persons and agencies to contact early in a project or even before a project begins for ideas, funds, cooperative efforts, etc.

The authors urge researchers to study the publication (distributed to participants) and to use the instrument and share their experience. Initial efforts using the instrument to do desk audits of research reported in the Western Region proceedings proved frustrating. Often research articles do not include dissemination and utilization information. It appears that researchers would have to be interviewed to explore the breadth of dissemination and utilization of research findings.

Reference

NCR-133: North Central Regional Committee on Home Economics Research Evaluation. (1987), Home Economics Research Impacts: Framework for Evaluation. Publication No. 316. Wooster, OH: Ohio Agricultural Research and Development Center.

FIGURE 1. Draft Form for Assessing Research Dissemination and Utilization

RESEARCH IMPACTS

Project:

Dissemination (where/how?)

				Utilization I			Dissemination I = Information S = Services T = Transfers P = Products E = Education D = Donations	Utilization II			
				Change				Client Change			
YES	NO	?	To:	Program	Product	Practice		Resources Level/Use		Level of Living	Well-being
					Indicator(s)					Indicator(s)	
Y	N	?	Government				I S T				
Y	N	?	Business/Industry				I S P				
Y	N	?	Legal/Health Related				I S E				
Y	N	?	Mass Media				I				
Y	N	?	Educational Institution				I E				
Y	N	?	Private/Voluntary Organization				I S D				
Y	N	?	Other				I S T P E D				

Conclusions:

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[1] Professor

[2] Affiliate faculty.

TEACHING ABOUT AIDS IN THE CLASSROOM: AN ANNOTATED BIBLIOGRAPHY

Diane Masuo, University of Hawaii at Manoa[1]
Joan M. Ash, Yakima Valley Community College[2]

More is not always better. Health educators and physicians today receive more printed and audio visual materials on AIDS than they have the time to review. Groups such as SIECUS (Sex Information and Education Council of the United States), CDC (Centers for Disease Control), and AMFAR (American Foundation for AIDS Research) have begun to annotate the plethora of materials available on AIDS. Even the most recent effort in 1988 by AMFAR, however, is out of date, and does not cover journal articles.

To further AMFAR's efforts and to increase awareness among Home Management and Family Economics educators of the contribution they can make with respect to helping families better cope with AIDS, a beginning annotated bibliography of journal articles, curricula, and videotapes has been completed. Clearly, there are many decisions that a family needs to make if one of its members has AIDS. What better place to focus on these decisions than in Home Management and Family Economics courses.

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[1] Assistant Professor of Consumer Economics and Family Resources

[2] Instructor, Social Sciences Department

CRITICAL CONCERNS OF KANSAS FAMILIES: A STATEWIDE SURVEY BY EXTENSION HOME ECONOMICS, KANSAS STATE UNIVERSITY

Katey Walker[1]
Marilyn Corbin[2]

Abstract

This poster presentation describes (1) an effective needs assessment technique and (2) the results of a survey which provided local county and area data on educational program needs to guide the Extension program development process. The method is applicable to a variety of situations requiring an assessment of local needs; it is not limited to the Extension Service.

Purpose

Effective program planning or curriculum development requires both a long range vision and a series of more specific, short-run educational programs designed to help students (adult or youth, formal or informal) move toward a more satisfactory quality of living. The home economics Extension specialists in Kansas planned a needs assessment survey to provide local data to supplement trends and statistics available on the national and state level.

Program development (planning, implementing, and evaluation) requires a balance among the three stages and a judicious mixture of resource allocation to each part. The purpose of the needs assessment survey was to prioritize and localize educational program needs according to county or area concerns, based on input from both traditional clientele and non-Extension participants and incorporate local considerations into state program thrusts. A secondary but also vital purpose was to involve local volunteers in conducting the survey and reviewing the results. Minimizing time and money expenditures was also crucial.

Procedure

What is the driving force in Extension Home Economics program planning? The mission is to strengthen families by providing research-based educational programs that meet family needs.

In an attempt to identify specific critical concerns of today's families, Extension Home Economics specialists developed a survey that was conducted in late 1986 by volunteer County Extension Program Development committee members. With each committee member surveying five or more adults, a total of 3,795 persons living in 93 of the state's 105 counties were queried about their personal and family concerns. Care was taken to include both those people who do participate in Extension educational programs as well as those who do not.

The survey was divided into ten subject matter sections. Each section was subdivided into several topics. Participants were asked to mark up to five items under each section that they felt were the highest concerns to them or their families.

Problems Identified

The high-priority problems identified in the survey were almost all of an economic nature. Most concerns related in some way to our agriculture or oil problems. When county statistics were tallied, the state picture was one of an economic crisis.

- The most frequently mentioned items from the Family Resource Management section included the need for more information on how to manage on a reduced income, and how to develop a personal or family budget. Other frequently marked items included estate planning (including making a will), balancing time among family, home and job, and ways to improve consumer buying skills.

- The rural crisis seemed to be an overriding issue in the Human Development area. Topics relating to supporting friends through troubled times, overcoming personal and family crises and helping children manage stress all received high priorities as areas of concern.

- Top rankings from the Food and Nutrition portion of the survey included health-related special diets, meal preparation, meal planning and food buying.

- Stretching the clothing dollar surfaced as the number one priority for the Clothing and Fabrics section. Preoccupation with the financial crisis of rural Kansas emerged again in this category as it does in other subject matter areas. Other topics with frequent marks included learning how to buy quality clothes that will last longer and how to enhance self-esteem through dress.

- The Housing and Interior Design section identified learning "do-it-yourself" home repair and interior decorating as the two highest priorities.

Top Critical Concerns

Respondents were also asked to select the four most crucial concerns facing Kansas families that they felt could be best addressed by Extension Home Economics programs. The top six, ranked in order of number of responses, were:

- Managing on a reduced income
- Adjusting diet for special needs
- Enhancing husband/wife relationships
- Understanding public issues
- Establishing a wellness lifestyle
- Reducing stress through leisure activities

Conclusions

The survey findings provide an information base to use in strengthening content areas, program delivery methods, and targeting audiences based upon clientele need. As a result of the survey, Extension Home Economics:

- has identified its priorities, and, in conjunction with other Extension programs, is targeting its efforts toward specific programming areas where realistic achievement of the greatest impact is possible.

- will target audiences to better utilize resources. More programs will be designed to reach out to the elderly, singles, youth, people in the middle years, and single parents.

- will place more effort on interdisciplinary programs. Because of its unique perspective, Extension Home Economics can provide research-based information and family-centered education to address a variety of problems.

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[1] Extension Specialist, Family Resources and Public Policy

[2] Assistant Director, Extension Home Economics

WRHMFEE CONFERENCE

MINUTES

Friday, November 4, 1988

The meeting was called to order at 1:10 p.m. by Phyllis Johnson, President.

Minutes of the 1987 Conference
Were accepted as presented.

Financial Report for the WRHMFEE Account
Presented by Arlene Holyoak, Executive Director. A copy is attached.

Conference Reports

a. 1987 Conference
Phyllis Johnson indicated that the total receipts were $7,528.98. Total expenditures were $6924.29, leaving a positive balance of $604.69 or 8% of total receipts.

b. 1988 Conference
Jane McCullough reported that it was too early to determine the financial status. A report will be submitted when all the bills are received.

c. 1989 Conference
Kay Henderson officially invited the group to come to Seattle for the 1989 conference. It will be held November 2-4 at the Edgewater or Hilton. The theme will be "Poverty."

d. Curriculum Showcase
Louise Parker submitted a written report which was presented by Arlene Holyoak. Three presentations were given at the conference. Louise indicated more formal guidelines need to be developed in order for the showcase session to be successful. More detail on categories for poster proposals, criteria for choosing and expectations regarding on-site participation and recognition through the proceedings need to be developed.

e. Proceedings Editor
Arlene Holyoak asked what manuscript style members preferred, APA or Journal of Consumer Affairs. After discussion, Arlene moved that we use APA. Molly Longstreth seconded and motion carried.

A problem we are confronting is that some computer printers will not accept oversized paper. We may need to think about changing our format.

Thanks to the insights of Carole Makela, a set of Proceedings have been sent to the Home Economics Division of the National Agricultural Library which means that the papers will be included in the NAL index. Arlene has informed them that future issues will be sent by the Executive Director to the following address:

U.S. Department of Agriculture
National Agricultural Library
Gift Program, Rm. 002 VC-88500
Beltsville, MD 20705

Committee Reports

a. WRHMFEE Research Awards
Beth Davis, reporting for Barbara Rowe, indicated that 3 excellent papers were submitted for the Masters Award. Lisa Baird was the recipient. The other two papers were submitted to the reviewed paper committee.

Recommendations given were to follow the submission time table religiously. Committee members must return their evaluations by August 1 (NOT August 10) to give the Reviewed Papers Committee sufficient time to read and review non-winning manuscripts. The manuscript criteria will be rewritten to conform with current APA style guidelines.

b. Refereed Papers
John Burton, reporting for Mari Wilhem, announced that five papers were submitted: three were accepted, one was referred to the reviewed section, and one was rejected. The question was raised as to why submissions are so low? Reasons given included competition with AFPCE and courage required in having paper go through the critique process.

c. Reviewed Papers
Tricia Ormsby announced that 13 papers were submitted, with one being received from the refereed committee and two from the research committee. The deadlines allowed time to receive papers from the other committees and be listed in the program.

d. Newsletter
Arlene Holyoak presented the attached financial report prepared by Jane Meiners. Continue sending news items to Jane. Questions raised by J. Driggers were: Is the goal of this organization to reach out? Should the subscription fee be raised? Can the mailings be increased? J. Driggers volunteered to coordinate the potential list for California Community Colleges.

e. Ad Hoc Committee on Name Change
Donna Selnick reported that she received 16 questionnaires with nine indicating no change and seven suggesting dropping either home management or family economics. Donna moved that the name Western Region Home Management Family Economics

Educators not be changed. Jane McCullough seconded and the motion carried unanimously.

Election of Officers

Norleen Ackerman presented two names for president--Jean Lown and Phyllis Johnson. Jean Lown was elected the new president.

Old Business

a. Proceedings from Past Conferences

Arlene Holyoak distributed the attached Inventory and Location of WRHMFEE Proceedings and questioned what should be done with large quantities of proceedings. Jane McCullough moved that Arlene Holyoak be authorized to market proceedings in anyway possible. John Burton second. Motion carried anonymously.

Two sets of proceedings will be kept in the organization. One full set well be sent to Kansas State Archives. Carol Makela suggested that each member check personal and university collections. Jean Lown will put the information about availability of proceedings in the AFPCE Newsletter. Doris Beard suggested (earlier) that the order form be bound in the 1988 proceedings.

New Business

a. Appointment of 1989 Committee Members

Phyllis Johnson announced the following chairs and committee members:

Research Award, Ph.D.: Diane Mauso, chair
Members: Beth Davis, Molly Longstreth, Jeanne Smith
Refereed Papers: Barbara Rowe, chair
Members: John Burton, Alice Mills Morrow, Nancy Kingsbury
Reviewed Papers: Norma Redeker, chair
Members: Peggy Berger, Joan Ash, Kay Zimka, Audrey Peterson, Becky Ward, Shirley Myers, Jerri Wolfe

b. Appointment of Proceedings Editor

Phyllis Johnson announced that Jeanne Peters will be the proceedings editor for 1989 and 1990.

c. 1990 Conference Invitation

The Consumer Sciences faculty of Colorado State University extended an invitation to meet in Fort Collins, Colorado in 1990. To quote from the October 1988 issue of "Successful Meetings" (the authority on meetings and incentive travel management), "Fort Collins caters mostly to regional meetings and is enthusiastically promoting this town of 89,000 residents."

d. Possible Changes in Guidelines

The policy on voting requires 2/3 vote at the annual meeting with proposed changes circulated 30 days prior to vote. The notice may be circulated through the Newsletter. The three proposed changes include:

1. Formalize the curriculum showcase as a standing committee.
2. Add Nebraska and Kansas to the official list of states. Professionals from non-Western States can attend the conference but not vote or hold office.
3. Lengthen term of President to two years. To avoid having both a new president and a new executive director in a given year, the term of the executive directory may need to be four rather than three years. With this extended commitment, Phyllis recommends that the organization pay the conference registration fees of the Executive Director.

Respectfully submitted,

Arlene Holyoak
Executive Director

WRHMFEE FINANCIAL STATEMENT
1988

Beginning Balance November 1, 1987		**$1,654.37**
INCOME		
1987 Conference	$604.69	
Interest	104.57	
Scholarship Donations	91.07	
Sale of Proceedings	337.00	
Replacement of 1987 Annual Conference Advance	300.00	
		$1,437.33
EXPENSES		
Proceedings	$131.59	
Telephone Calls	59.20	
Postage	25.00	
Supplies	5.97	
1988 Annual Conference Advance	300.00	
Printing	10.00	
Check Charge	6.75	
Paper Committee	89.00	
1988 Research Award	400.00	
		<$1,027.51>
Ending Balance October 31, 1988		**$2,064.19**

FINANCIAL SUMMARY
WESTERN REGION HOME MANAGEMENT-FAMILY ECONOMICS NEWSLETTER

October 31, 1988

INCOME:		
Starting balance (January 31, 1988)		$458.67
Subscriptions		182.50
	TOTAL	$641.17
EXPENSES:		
Copying		$ 76.82
Postage		58.75
Envelopes and mailing labels		11.00
Phone calls and bank fees		11.55
	TOTAL	$158.12
SUMMARY:		
Income		$641.17
Expenses		-158.12
	BALANCE	$483.05

Submitted by: Jane Meiners, Editor
Oregon State University

WRHMFEE CONFERENCE 1987

FINANCIAL STATEMENT

INCOME

Beginning Fund				$ 300.00

RECEIPTS IN CANADIAN DOLLARS

Registrations	- 11 @ $125.00	$1,375.00		
	4 @ partial rates	74.00		
	1 complimentary	-	$1,449.00	
Meals			20.00	
Indian Night	- 10 @ $33.00		330.00	
Victoria Trip	- 4 @ $51.00	204.00		
	- assessment	36.00	240.00	
Extra Proceedings	- 1 @ $13.50		13.50	
Newsletters	- 4 @ $3.50		14.00	
			$2,066.50	
Converted to U.S. Dollars				$1,537.48

RECEIPTS IN U.S. DOLLARS

Registrations	- 35 @ $93.00	$3,255.00		
	- 9 @ partial rates	235.00		
	- 1 complimentary	-	3,490.00	
Meals			158.00	
Indian Night	- 38 @ $25.00		950.00	
Victoria Trip	- 21 @ $38.00	798.00		
	- Assessment	48.00	846.00	
Extra Proceedings	- 10 @ $10.00		100.00	
Newsletters	- 28 @ $2.50		70.00	
Donations	- Scholarship Fund		77.50	5,691.50
		Total Income		U.S. $7,528.98

EXPENDITURES IN CANADIAN DOLLARS

Programs, brochures, mailing, stationery	$ 470.44	
Telephone	212.86	
Meals and refreshments	3,588.41	
Projectors and P.A.	229.82	
Hotel Room	81.00	
Coach to Victoria	1,348.75	
Indian Night	1,416.25	
Honorarium	200.00	
Donation to B.C. - CAC	50.00	
Miscellaneous	29.97	
Total	$7,627.50	
Converted to U.S. Dollars		$5,674.86

EXPENDITURES IN U.S. DOLLARS

Honorarium	63.94	
Provision for Cost of Proceedings - 46 regular, 10 extra @ $10.00	560.00	
Provision for Cost of Newsletters - 40 @ $2.50	100.00	
For Credit to Scholarship Fund	77.50	
Replacement of Beginning Fund	300.00	
Exchange Adjustment - See Note 1	147.99	1,249.43
Excess of Income over Expenses		604.69
		U.S. $7,528.98

Note 1. The fluctuations in the exchange of U.S. and Canadian dollars resulted in a loss. The expenses of the Convention were priced in March and incurred in November.

INVENTORY AND LOCATION OF WRHM-FEE PROCEEDINGS
NOVEMBER 1988

	Colorado State	University of New Mexico	Oregon State	Total	Unit Price	Total Value
1987	0	0	14	14	$10.00	$140.00
1986	0	85	6	91	10.00	910.00
1985	0	28	20	48	10.00	480.00
1984	0	0	8	8	10.00	80.00
1983	0	45	10	55	10.00	550.00
1982	20	0	10	30	10.00	300.00
1981	20	0	10	30	8.00	240.00
1980	51	0	10	61	8.00	488.00
1979	39	0	9	48	7.00	336.00
1978	54	0	10	64	5.50	352.00
1977	8	0	10	18	5.50	99.00
1976	4	0	10	14	5.00	70.00
1975	2	0	10	12	4.00	48.00
					$103.00	$4093.00

PROGRAM

WESTERN REGION HOME MANAGEMENT FAMILY ECONOMICS EDUCATORS CONFERENCE

Red Lion Hotel
Salt Lake City, Utah

November 3-5, 1988

Thursday, November 3, 1988

9:00 a.m. **Registration**

9:30 a.m. **Opening General Session**
Welcome:
Jane McCullough, Utah State University

10:00 a.m. **"Stress and Coping in Everyday Life"**
Richard H. Rahe, M.D.
Director of Nevada Stress Center

12:00 p.m. **Lunch**

1:00 p.m. **Refereed Paper Session**
Presider:
Cathy Zick, University of Utah

"The Economics of Divorce and Remarriage for Rural Families"
Authors:
Barbara Rowe and Jean Lown, Utah State University

Discussants:
Jeanne S. Smith, University of California, Davis
Donna Selnick, California State University, Sacramento

2:00 p.m. Presider:
John Burton, University of Utah

"The Federal Government and Family Policy"
Author:
Orrin Hatch, U.S. Senator, Utah

3:00 p.m. Break

3:30 p.m. **Reviewed Paper Session**
Presider:
Cathy Zick, University of Utah

"Subjective Life Quality in Dairy Farm Households"
Authors:
Norleen S. Ackerman, Glen O. Jenson, and DeeVon Bailey, Utah State University

"Application of the Consumer Diffusion of Innovation Model to Teacher's Adoption of Microcomputers"
Authors:
Molly Longstreth and Maureen E. Kelly, University of Arizona
Karen L. Paris, Panama City, Panama

4:30 p.m. **Curriculum Showcase**
Organizer:
Louise Parker, Washington State University

5:30 p.m. **Reception**

Friday, November 4, 1988

8:30 a.m. **Refereed Paper Session**
Presider:
Jean Lown, Utah State University

"An Interactive Simulation Approach to Achieving Personal Financial Goals"
Authors:
Ricardo Ulivi, California State University
Dominguez Hills, Harold Dillbeck, and John Hinds, California State University, Long Beach

Discussants:
John Burton, University of Utah
Audrey Peterson, University of Montana

9:30 a.m. **Masters Student Research Award Presentation**
Introduction:
Jeanne Peters, University of Nevada

"Comparison of Financial Profiles, Stress Levels, and Satisfaction Levels Among One-Earner and Two-Earner Rural Nevada Family Households"
Author:
Lisa Baird, Masters College

10:30 a.m. **Break**

11:00 a.m. **"Stress: The Economics and Emotions of Child Support"**
Author:
Judge Judith M. Billings, Utah Court of Appeals

Introduction:
Cathy Zick, University of Utah

12:00 p.m. **Lunch**

1:00 p.m. **WRHMFEE Business Meeting**
Presider:
Phyllis Johnson, University of British Columbia
WRHMFEE President

2:00 p.m. **Reviewed Paper Session**
Presider:
John Burton, University of Utah

"Mutual Fund Investing: A Cost-Effective Alternative for Families"
Authors:
Craig L. Israelson and Ivan F. Beutler, Brigham Young University

"Who Prepares a Balance Sheet? An Exploratory Analysis"
Author:
Elizabeth P. Davis, University of Nebraska

3:00 p.m. **Break**

3:30 p.m. **Reviewed Paper Session**
Presider:
John Burton, University of Utah

"Living Resourcefully--It is Your Decision: An Interdisciplinary Extension Educational Program"
Author:
Katey Walker, Kansas State University

"Factors Related to Perceived Income Adequacy Among Married Students"
Author:
Naheel Jeries, Iowa State University

Saturday, November 5, 1988

8:30 a.m. **Refereed Paper Session**

Presider:
Jane McCullough, Utah State University

"Lake Topaz Retirement Area: Factors that Attract and Retain Retirees"

Authors:
Jeanne Peters, Patricia Tripple, and Leslie Brokaw,
University of Nevada

Discussants:
Geraldine Olson, Oregon State University
Suzanne Tucker, Colorado State University

9:30 a.m. **Reviewed Paper Session**

"Development of Models of the Labor Force Patterns of Southeast Asian Refugee Women"

Author:
Phyllis Johnson, University of British Columbia

"Consumer Perspectives on Quality of Conventional and Organic Foods, and Purchasing Patterns of Organic Foods"

Authors:
Desmond Jolly, University of California, Davis
Jagjit Johal, San Francisco State University

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Western Regional
Home Management
Family Economics Educators

Author & Title Index to Conference Proceedings, 1970-1987

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FOREWORD

This index of the proceedings of the Western Region Home Management Family Economics Educators[1] includes the 18 years, 1970 through 1987, conferences 10 through 27.

The index includes two sections: title of the paper and author, with co-authors listed individually. Listings are alphabetical and each includes the year of the conference and the page numbers of the paper in the proceedings. Surnames used in the author index are those used at the time the paper was given; an individual may be listed under more than one name.

This format does enable one to search the index by subject matter when the title is highly descriptive of the content and the primary content is an early word in the title. Further the quantity of articles does not preclude browsing of the entire listing. To some extent the conference theme may be helpful in identifying topics. To assist in use of the Index the conferences are identified below by year, theme and location. Also since 1982 papers have included abstracts that may be useful in reviewing content.

Identification of Year, Conference Number, Theme and Location.

Year	Conference #	Theme	Location
1970	10th	The 1970s: Relations and Relevancy	Fort Collins, CO Colorado State University
1971	11th	Behavioral Aspects of Management	Salt Lake City, UT Hotel Utah
1972	12th	Perspectives into the Future for Consumer Education	Fresno, CA Hilton Hotel
1973	13th	Consider Resources and Communication	Corvallis, OR Oregon State University
1974	14th	The Family and the Economy: Paradox, Perspectives, Priorities	Reno, NV University of Nevada
1975	15th	Management - Era of Scarcity	Los Angeles, CA Sheraton Inn, Airport
1976	16th	Family Economics: Resources and Security in an Era or Scarcity	Provo, UT Brigham Young University
1977	17th	Influencing Public Policy	Sacramento, CA Mansion Inn
1978	18th	Changing Families in Changing Environments	Tempe, AZ Arizona State University
1979	19th	Family, Community, Government--International Decisions	Pullman, WA Washington State Univ.
1980	20th	Issues in Action -- Women in Transition	Newport Beach, CA Sheraton Hotel
1981	21st	Potentials, Policies, Pizazz	Denver, CO Holiday Inn, Downtown
1982	22nd	Confronting Change -- Dimensions, Diversity, Decisions	Portland, OR Red Lion Motor Inn
1983	23rd	Changes in Economic Policy -- Implications for Family Well-Being	Salt Lake City, UT Hotel
1984	24th	Understanding the Economics of Families	Honolulu, HI Quality Inn

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[1] Prior to 1976 the group's title was Western Regional College Teachers of Home Management Family Economics.

Year	Conference #	Theme	Location
1985	25th		Scottsdale, AZ Doubletree Inn
1986	26th	Investing in Human Capital (Vol 1)	San Francisco, CA Miyako Hotel
1987	27th	Economics of Health and Welfare (Vol 2)	Vancouver, BC Pan Pacific Hotel

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[1] "A" indicates the paper is found in an addendum to the 1984 Proceedings.

[2] Lorenzo Foster's panel presentation was not printed in 1972 Proceedings.

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